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CITY OF MANCHESTER

REPORT

ON THE

HEALTH OF THE
CITY OF MANCHESTER

FOR 1956

BY THE

MEDICAL OFFICER OF HEALTH

63477



TABLE OF CONTENTS

Section 1—General Services Division:—

GENERAL STATISTICS AND METEOROLOGY	16
VITAL STATISTICS	20
REGISTRAR GENERAL'S ABSTRACT	34A
INFECTIOUS DISEASES AND EPIDEMIOLOGY	36
GENERAL MEDICAL SERVICES	66
MENTAL HEALTH SERVICE	68
HEALTH EDUCATION	77
AMBULANCE AND TRANSPORT SERVICE	78
RESIDENTIAL HOMES	82
MUNICIPAL HOSTELS	87

Section 2—Nursing Services Division:—

DOMICILIARY MIDWIFERY	91
INCIDENCE OF BLINDNESS	98
CARE OF MOTHERS AND YOUNG CHILDREN	99
DENTAL CARE	108
HEALTH VISITING	110
REGISTRATION OF NURSING HOMES	126
DAY NURSERIES	127
TUBERCULOSIS SERVICE	129
EPILEPSY AND CEREBRAL PALSY	143
HOME NURSING	143
DARBISHIRE HOUSE HEALTH CENTRE	147
CONVALESCENCE	148
HOME HELP SERVICE	148
FAMILY WELFARE SERVICE	150

Section 3—Sanitary Services Division:—

WATER SUPPLY	157
FOOD SUPPLY:—	
FOOD HYGIENE	166
FOODS AND DRUGS ADULTERATION	172
MEAT	175
SMOKE PREVENTION	179
HOUSING CONDITIONS	190
OCCUPATIONAL CONDITIONS	198
GENERAL SANITARY CONDITIONS	200
PUBLIC CONVENIENCES	210
PUBLIC ANALYST	211
MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE	233
GENERAL INDEX	239

HEALTH DEPARTMENT,
TOWN HALL,
MANCHESTER, 2.

14th May, 1957.

MY LORD MAYOR, ALDERMEN AND MEMBERS OF THE CITY COUNCIL,

I have pleasure in presenting my report on the health of the City for the year 1956.

Population

The Registrar General estimates the civilian population for 1956 at 686,200, a decrease of 6,000 on 1955 and 16,882 on the census population for 1951.

Marriages

The number of marriages registered during the year was 6,324, compared with 6,338 the previous year. The marriage rate was 18·43, as against 18·31.

Births

Registered live births numbered 11,967 (6,225 males, 5,742 females), giving a rate of 17·44 per 1,000 population, compared with 16·91 in 1955, an increase of 0·53. The rate for England and Wales was 15·7, an increase of 0·7 on the previous year.

Of the 11,967 births, 11,052 (5,738 males, 5,314 females) were legitimate and 915 (487 males, 428 females) were illegitimate, the ratio of illegitimate to legitimate being 1 to 12. The percentage of illegitimate births was 7·65 which is an increase of 0·60 on 1955.

There were 324 stillbirths (179 males, 145 females), giving a rate of 26·36 per 1,000 total births, which is 0·09 lower than the rate for 1955. The ratio of registered "still" to registered "live" births was 1 to 37. The rate for England and Wales was 23·0, a decrease of 0·1.

The percentage of total births in institutions was 62·27.

The percentage of total registered births which took place at home was 38, compared with 37 in 1955 and 37 in 1954. This means that in recent years about 63 per cent. of Manchester mothers had their babies in hospitals and maternity homes—an extraordinarily low figure in the light of the bad housing conditions in the City and which compares ill with the corresponding figure in many areas in the country where environmental conditions are much better than in Manchester. It is understood that the Manchester Regional Hospital Board proposes to make some additional provision of maternity beds in the near future. Meanwhile many mothers who wish to be confined in hospital maternity wards are denied admission and many who are admitted are discharged earlier than they should be because of shortage of maternity beds. There is also a grave shortage of ante-natal beds in the City.

Deaths.

The number of deaths allocated to the City during the year was 8,475 (4,232 males and 4,243 females), a ratio to the population of 1 in 81 or a death rate per 1,000 of the population of 12·35 as compared with 12·68 for 1955 and an average of 12·65 for the previous five years. The rate for England and Wales for 1956 was 11·7.

Deaths from all forms of tuberculosis numbered 114, the lowest ever recorded for the City. Respiratory tuberculosis accounted for 101 deaths and other forms of tuberculosis for 13 deaths, compared with 130 and 14 respectively in 1955. The waiting list for sanatorium beds is now very small—a main cause of reduced morbidity and mortality. Tuberculosis is still with us but is clearly on the way out.

There were 1,531 deaths from all forms of cancer as against 1,580 for 1955, a decrease of 49. The percentage of deaths of persons over 65 years was 48.1, whilst that for 1955 was 51.6, a decrease of 3.5 per cent.

Deaths from cancer of the lung and bronchus numbered 407 (341 male and 66 female), being 16 more than 1955 when there were 391 (328 male and 63 female) and 405 (356 male and 49 female) in 1954. The percentage of deaths over 65 years was 37.6 as against 37.9 for 1955, showing a decrease of 0.3 per cent.

Infant mortality

Deaths of infants under one year of age registered during 1956 numbered 358. This was an increase of 26 on the figure for the previous year and gives a rate of 29.92 per 1,000 live births, 1.55 higher than for 1955, which was the lowest infant mortality rate recorded for the City. The rate for England and Wales was 23.8.

The number of neo-natal deaths was 241, giving a rate of 20.14 per 1,000 live births as against 215 deaths and a rate of 18.37 in 1955. Most of the increase in infant mortality in 1956 as compared with 1955 is in this group of deaths under four weeks of age.

The infant deaths per 1,000 births fell from 64 in 1946 to 28 in 1955. It is a matter of very great regret that this splendid progress should have been halted and become regressive in 1956. The rate for England and Wales continues to decrease.

The increase in infant mortality is chiefly due to an increase in neo-natal deaths and most of the increase in these is associated with immaturity. The most striking part of the increase is in domiciliary practice. The causes are:—

- (a) lack of ante-natal care because of failure by some mothers to seek it and possibly because of the shortage of ante-natal beds, and
- (b) bad housing conditions which are inimical to the survival of infants and in particular of premature infants.

Maternal mortality

There was one death from puerperal and post-abortive sepsis during 1956 and two from other maternal causes, giving a rate for all maternal deaths of 0.24 per 1,000 total births, the lowest ever recorded for the City. This compared with 0.75 for 1955 and with a rate of 0.56 for England and Wales for 1956.

Comparability factor

At the request of the Health Committee a note is given on the comparability factors relating to births and deaths.

The crude birth or death rates of an area represent the number of births or deaths registered during the year in the area per 1,000 of the estimated population at the middle of the year, correction having been made for the transference of registration to the appropriate places of residence.

The proportion of the population in each age group varies considerably in different areas, and a larger preponderance of older persons will tend to reduce the birth rate and increase the death rate, whilst a small proportion of old people in the population will have the opposite effect of increasing the birth rate and decreasing the death rate.

The comparability factor is a statistical device based on the sex and age constitution of a population of an area which eliminates to a large extent the fallacies that tend to arise when crude birth or death rates are compared.

The Registrar General issued a comparability factor for births and deaths to each area based on the standardized population in the country as a whole, and when the crude birth and death rates are multiplied by the appropriate factors the adjusted rates obtained are then comparable with the adjusted rates for other areas in the country and the country as a whole.

Poliomyelitis

A considerable outbreak of poliomyelitis occurred in the City in 1956—a full account is included in Section I together with a statement on poliomyelitis vaccination.

Shortage of beds for mental defectives

The Manchester waiting list of mental defectives for admission to hospital in March, 1957, was 135. The following table shows the length of time which patients have been on the waiting list.

Year placed on waiting list	Males priority groups				Females priority groups				Totals priority groups			
	0	1	2	3	0	1	2	3	0	1	2	3
1949	1	-	-	-	5	-	-	-	6	-	-	-
1950	2	-	1	-	-	-	1	-	2	-	2	-
1951	2	-	1	-	-	1	4	-	2	1	5	-
1952	3	-	3	-	-	1	3	-	3	1	6	-
1953	5	-	1	1	7	1	2	-	12	1	3	1
1954	7	1	7	1	1	-	4	1	8	1	11	2
1955	3	2	6	-	2	4	6	1	5	6	12	1
1956	5	5	6	5	3	3	5	-	8	8	11	5
1957	-	1	6	1	-	-	4	-	-	1	10	1
Totals ..	28	9	31	8	18	10	29	2	46	19	60	10

(20.3.57)

Strong representations have been made to the Manchester Regional Hospital Board by representatives of the City Council about this unsatisfactory state of affairs, but it is quite clear that a number of years will elapse before the position becomes satisfactory.

The casework of the health visitors

More and more is the casework of the health visitors extending to cover the needs of the whole family whilst maintaining and improving the services for

the care and welfare of mother and child. The health of the City depends to a considerable extent on the adequacy and efficiency of the health visiting services.

Rate of rehousing

The situation has developed whereby the rate of building new houses has slowed down to such an extent as to jeopardise seriously the programme of slum clearance previously adopted by the City Council in February, 1955, and later submitted to the Ministry of Housing and Local Government in respect of the first five years.

Patching of unfit houses

In accordance with the intention of the Housing Repairs and Rents Act, 1954, where a local authority's housing conditions prevent clearance of all their unfit houses within five years, consideration has been given to deferring demolition and patching of some 200 unfit houses in one area.

Air pollution

The Clean Air Act was enacted and parts, including the provisions dealing with the establishment of smoke control areas, height of chimneys, and new installations to be as smokeless as practicable, became operative at the end of the year.

The requirement as to the height of chimneys other than for dwellings, shops and offices gives legislative recognition for the first time to a vital need for the proper dispersal of products of combustion, if such products are otherwise unavoidable.

The City Council's decision to use gas or electricity for heating of Corporation buildings and aiming at the elimination of both visible and invisible pollutants, also eliminates the necessity of high chimneys, thus satisfying both public health and visual amenity.

Inspection of meat and other foods

At the City Council meeting in November it was decided on a report of the General and Parliamentary Committee that there should be a transfer of functions from the Markets Committee to the Health Committee as follows:

- (a) the regulation and inspection of private slaughter-houses and knackers' yards, and the slaughter of animals;
- (b) the examination and seizure of unsound food and the inspection of food premises;
- (c) the inspection of premises for the purpose of ensuring compliance with the statutory requirements regarding the marking of imported foods, the grading of agriculture and fishery produce and the marking of preserved eggs;
- (d) the inspection of premises used for the sale of shellfish and the taking of samples for bacteriological examination;
- (e) the inspection of premises used for the sale of fish for the purposes of observing the close season for certain species of fish ;
- (f) the powers and functions of the Council under the Diseases of Animals Acts, other than the powers and functions relating to the provisions of wharves for landing imported animals.

The smooth transfer of these duties has been made whilst some consequential administrative details are under joint consideration by the respective committees.

It gives me great pleasure to acknowledge gratefully the encouragement, stimulation and help given by the Chairman and members of the Health Committee and the loyal devotion of the staff to the work of the Department in the service of the City.

I have the honour to be,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

CHARLES METCALFE BROWN,

Medical Officer of Health.

HEALTH COMMITTEE

1956-57

CHAIRMAN—Councillor J. Conway

DEPUTY CHAIRMAN—Alderman R. E. Thomas, J.P.

THE LORD MAYOR—Councillor Harry Sharp, J.P.

Alderman Hannah Baldwin, J.P.

Councillor H. Jenkins

„ J. E. Burgess
„ W. Chadwick, M.B., Ch.B.
„ Mary Knight
„ W. Onions, M.B.E., J.P., M.A.
„ F. E. Tylecote, C.B.E., J.P.,
M.D., D.P.H., F.R.C.P.
„ T. Walker, J.P.

„ B. Lawson
„ T. Lomas
„ S. N. M. Moxley
(to 25.7.56)
„ J. Taylor, M.B., Ch.B.
(from 25.7.56)
„ H. Pigott, M.B., Ch.B.
„ W. Sharp
„ Winifred Smith
„ Lily Thomas
„ Mabel S. Whittaker, J.P.

Councillor Nellie Beer, J.P.

„ J. Bowes
„ P. Chadwick, J.P.
„ B. Conlan
„ Eveline Hill, J.P., M.P.

SUB-COMMITTEES

The following sub-committees are appointed to carry out certain of the duties referred to the Health Committee; these are particularized below. With the exception of those of the Sanitary Defects Sub-committee, their proceedings are subject to approval by the Health Committee.

Sanitary

Sanitation and buildings; nuisance and offensive trades; common lodging-houses and houses let-in-lodgings; factories; workplaces and shops; provisions regarding food and drugs; poisons and pharmacy; public conveniences; the granting of certificates of disrepair and reports to owners under the Housing Repairs and Rents Act, 1954; the Rag Flock and Other Filling Materials Act, 1951; the Shops Act, 1950, and the Young Persons (Employment) Act, 1938; the abatement of smoke nuisances and atmospheric pollution; hairdressers registration; street traders and persons trading in food on open sites; and all questions relating to the management and administration of the Sanitary Services Division with the exception of those relating to the appointment of staff, salaries, wages and conditions of service of officers and servants.

Sanitary Defects

To this Sub-committee are delegated under Section 273 of the Public Health Act, 1936, the Health Committee's powers to deal with urgent cases of sanitary defects in premises and it is empowered to authorize the service of notices upon owners, occupiers or other persons responsible requiring them, within the period specified in the notices, to execute the works required and, in the event of the notices not being complied with, to instruct the Medical Officer of Health to carry out the work required and/or to instruct the Town Clerk to institute the necessary summary proceedings.

Maternity and Child Welfare

Maternity and child welfare, including all the duties in the proposals of the City Council under the National Health Service Acts, relating to midwifery, health visiting, care of mothers and young children (excepting the portion relating to the management of Knowle House), home nursing, prevention of illness, care and after-care and home helps; the cleansing of persons infested with vermin; the control and management of day nurseries; and the administration of the Nursing Services Division with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service of officers and servants.

Health Centres

All matters relating to the planning, siting, erection and equipment of health centres, and to undertake, as and when they are erected, the control and management of health centres in the City with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service of officers and servants.

Mental Health

All matters arising out of the proposals of the City Council under the National Health Service Acts concerning mental health with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service of officers and servants.

Ambulance and Transport

All matters relating to the control and management of ambulances and ambulance stations, passenger cars and other vehicles and garages, with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service of officers and servants.

Residential Homes

All matters relating to the control and management of Dr. Garrett Memorial Home, Knowle House, Langho Colony, Ashton House and Walton House, with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service of officers and servants, and the purchase of bulk supplies.

Staff

All questions affecting the appointment of staff, salaries, wages and conditions of service of officers and servants in the employ of the Health Committee.

Supplies

The purchase of bulk supplies of articles required by Langho Colony, Dr. Garrett Memorial Home, Knowle House, Ashton House, Walton House and the day nurseries, and those required by the Children's, Education and Welfare Services Committees for use at residential institutions under their control.

Annual Estimates

This Sub-committee considers the whole of the draft annual estimates for the Health Committee, including all items of special works, and submits the recommendations to the Health Committee.

HEALTH OFFICERS

(A) Medical

C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law — — — —	Medical Officer of Health and Principal School Medical Officer
A. M. M. Grierson, O.B.E., M.D., D.P.H., F.R.S.E.	Deputy Medical Officer of Health
B. J. Griffiths, B.Sc., M.R.C.S., L.R.C.P., D.P.H.	Senior Medical Officer—Administrative
Alice I. Burke, M.B., Ch.B., D.P.H. ———	Senior Medical Officer—Nursing Services
W. Robinson, M.C., M.D., M.R.C.P. ———	Consultant Chest Physician—Part-time

(B) Other professional

J. Graham, F.A.P.H.I., M.R.S.H. ———	Chief Public Health Inspector
Alfred N. Leather, B.Sc., F.R.I.C. ———	Public Analyst
David E. Orr, M.R.C.V.S.	Chief Veterinary Officer from (7.11.56)

(c) Lay

C. A. Hay, M.B.E.	Chief Administrative Assistant—Nursing Services Division
C. W. Wilkinson — — — —	Chief Administrative Assistant—General Services Division

Number of staff employed in the Health Department
in December, 1956
(part-time staff expressed as the whole-time equivalent)

Type of staff	Number employed
Administrative medical officers	4
Clinical medical officers	15
Analytical chemists and laboratory assistants	7
Nursing staffs:—	
Health visiting	119
Midwifery	53
Day nurseries	277
Residential homes	95
Other	6
	— 550
Medical auxiliaries	7
Teachers	4
Social workers	12
Occupation centre supervisors and assistants	17
Public health inspectors and trainee public health inspectors	71
Administrative and clerical staff	152
Ambulance control room staff	13
Storekeepers and assistants	6
Supervisors—public conveniences service	2
Operational staff, manual workers, etc.:—	
Ambulance and transport service	174
Public conveniences service	84
Domestic staff in day nurseries	70
Domestic staff in residential homes	81
Home helps.. .. .	115
Domestic staff in municipal hostels	69
Rodent operatives	27
Others	44
	— 664
Total	1,524

The following staffs were employed on an agency basis, and are not included above:—

86 district nurses employed by the Manchester District Nursing Institution.

10 district midwives employed by St. Mary's Hospital extern service.



City of Manchester.

MUNICIPAL WARDS 1956

SHOWING
BIRTH RATE per 1,000 population
DEATH RATE per 1,000 population
INFANT DEATH RATE per 1,000 live births
NUMBER OF PERSONS PER ACRE



CITY OF MANCHESTER

POPULATION	686,200
BIRTH RATE	17.44 per 1,000 population
DEATH RATE	12.35 per 1,000 population
INFANT DEATH RATE	29.92 per 1,000 live births
NUMBER OF PERSONS PER ACRE	25.18

City of

MUNICIPAL WARDS

1928

CHARTER

DEATH RATE PER 1000

1927

General Services Division

GENERAL STATISTICS

METEOROLOGY

VITAL STATISTICS

REGISTRAR GENERAL'S ABSTRACT

INFECTIOUS DISEASES

FOOD POISONING

EPIDEMIOLOGY

GENERAL MEDICAL SERVICES

MENTAL HEALTH

HEALTH EDUCATION

AMBULANCE SERVICE

HOSPITAL CAR SERVICE

MUNICIPAL CAR POOL

DISINFECTION SERVICE

RESIDENTIAL HOMES:

Langho Colony for sane epileptics

Dr. Garrett Memorial Home for convalescent children

MUNICIPAL HOSTELS:

Ashton House for women

Walton House for men

GENERAL STATISTICS

Registrar General's estimated population mid-year, 1956

			Males	323,398					
			Females	362,802	..	..	..	686,200	
Census population, 1951	..		Males	331,355					
			Females	371,727	..	..	..	703,082	

			Males	Females	Totals				
Live births	Legitimate	..	5,738	5,314	11,052				
	Illegitimate	..	487	428	915	..	..	11,967	

Live birth rate per 1,000 of population 17.44

			Males	Females	Totals				
Still-births	Legitimate	..	158	135	293				
	Illegitimate	..	21	10	31	..	..	324	

Still-birth rate per 1,000 total births (live and still) 26.36

Deaths	..	..	..	..	..	..	..	..	..
			Males	4,232					
			Females	4,243	..	..	..	8,475	

Death rate per 1,000 of population			Males	..	13.09				
			Females	11.70	..	..	..	12.35	

Comparability factor	..	..	..	..	..	..	Births	..	0.95
							Deaths	..	1.18

Birth rate as adjusted by factor 16.74

Death rate as adjusted by factor 14.57

Excess of births over deaths.. .. . 3,492

Percentage of mortality occurring in institutions 47.47

Maternal mortality :—

			Deaths.	Rate per 1,000 total births					
Sepsis of pregnancy and abortion			1	0.08					
Other maternal causes..	..	..	2	0.16	..	..	..	0.24	

Deaths of infants under one year of age:—

All infants	..	..	358—rate per 1,000 live births	..	..	..	29.92	
Legitimate infants			327—rate per 1,000 legitimate live births	..			29.95	
Illegitimate infants			31—rate per 1,000 illegitimate live births	..			33.88	

Number of persons married per 1,000 of population.. .. .	18.43
Area of the City in acres	27,255
Number of persons per acre	25
Number of occupied structurally separate dwellings at Census 1951	201,027
Number of persons per occupied structurally separate dwelling at Census 1951	3.50
Number of houses according to Rate Book (1st April, 1956) ..	210,444
Number of persons per house	3.26
Rateable value (1st April, 1956)	£11,356,557
Sum represented by a penny rate (estimated)	£44,100
Number of new houses erected during 1956 :	
By local authority	1,364
By other bodies or persons	352
	— — 1,716

Manchester is the centre of one of the largest industrial areas in the world, providing major banking, insurance, packing, shipping, transport, entertainment and shopping facilities for the area. It ranks as the third seaport in Britain in terms of tonnage of ships and cargoes using the port and the second airport in the country. Road and rail communications have also made Manchester the natural junction of main routes from the North, South, East and West.

Manchester airport, from which regular inter-continental and transatlantic services now operate, serves not only Lancashire's industry, but Yorkshire's woollen textile trade and steel mills, the Potteries and much of the industrial area of the Midlands.

METEOROLOGY

Extracts from readings taken at Manchester Airport, Ringway.

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at 09.00 G.M.T.
January	36·9	38·5	42·5	33·9	38·2	4·31	18	49·29	4
February	30·9	32·4	37·9	27·6	32·7	0·59	6	64·67	7
March	40·0	43·5	50·5	36·8	43·7	1·07	6	147·25	0
April	40·4	44·2	52·6	35·9	44·3	2·78	7	145·80	0
May	48·2	53·2	62·2	44·4	53·3	0·99	7	223·12	0
June	50·9	54·6	61·9	48·5	55·2	2·33	14	130·50	1
July	55·7	59·7	66·5	53·6	60·1	4·45	15	133·61	0
August	52·4	55·5	62·4	49·5	55·9	7·93	19	120·28	0
September	57·7	54·3	64·5	51·6	58·1	2·10	10	113·70	0
October	46·1	48·4	55·1	42·2	48·7	2·26	8	93·31	4
November	40·6	42·5	47·2	38·4	42·8	1·22	8	48·60	4
December	40·5	42·2	45·7	38·6	42·1	2·63	15	25·11	2
YEAR ..	45·0	47·4	54·1	41·7	47·9	32·66	133	1295·24	22
	Means					Totals			

METEOROLOGY

Extracts from readings taken at the Whitworth Observatory, Manchester.

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at 09.00 G.M.T.
January	37.7	39.0	44.5	35.2	39.9	4.19	17	24.80	7
February	31.5	32.7	38.5	29.2	33.9	0.88	6	33.06	8
March	39.9	43.2	51.4	38.2	44.8	1.03	6	78.43	0
April	41.3	45.3	52.5	33.1	45.3	3.30	14	76.80	0
May	49.5	54.1	62.3	46.6	54.5	0.90	7	155.93	0
June	51.8	55.5	62.8	50.2	56.5	2.32	15	129.60	0
July	56.0	60.1	67.3	54.8	61.1	5.50	14	116.25	0
August	53.4	55.9	62.9	50.6	56.7	8.53	18	80.81	0
September	55.0	58.0	63.7	52.5	58.1	2.76	10	85.50	0
October	46.1	48.0	55.6	43.7	49.7	2.12	16	63.10	8
November	41.5	43.4	48.5	39.8	44.1	1.38	12	22.50	9
December	41.4	43.1	46.0	39.0	43.0	2.86	16	5.27	5
YEAR	45.4	48.2	54.7	43.2	48.9	35.77	151	872.05	37
Means					Totals				

VITAL STATISTICS

Causes of death

Registrar-General's Return
Manchester

CAUSES OF DEATH	AGES AT DEATH											
	Male	Female	All ages	0-	1-	5-	15-	25-	45-	65-	75-	
Tuberculosis, respiratory	67	34	101	—	—	—	1	17	48	23	12	
„ other	8	5	13	—	1	1	2	3	2	1	3	
Syphilitic disease	17	9	26	—	—	—	—	4	11	6	5	
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	
Whooping cough	—	—	—	—	—	—	—	—	—	—	—	
Meningococcal infections	5	4	9	7	2	—	—	—	—	—	—	
Acute poliomyelitis	5	3	8	1	—	—	2	5	—	—	—	
Measles	—	—	—	—	—	—	—	—	—	—	—	
Other infective and parasitic diseases	7	9	16	2	1	—	1	5	3	2	2	
Malignant neoplasm, stomach	116	124	240	—	—	—	—	5	88	82	63	
„ „ lung, bronchus	341	66	407	—	—	—	—	17	237	117	36	
„ „ breast	1	126	127	—	—	—	—	12	65	28	22	
„ „ uterus	—	83	83	—	—	—	—	11	45	21	6	
Other malignant and lymphatic neoplasms	314	323	637	1	3	3	11	34	235	185	165	
Leukaemia, alcaukaemia	19	18	37	—	—	4	4	6	13	5	5	
Diabetes	11	44	55	—	—	1	—	1	17	20	16	
Vascular lesions of central nervous system	477	726	1203	1	—	2	1	26	216	357	600	
Coronary disease, angina	656	387	1043	1	—	—	—	37	383	355	264	
Hypertension with heart disease ..	52	84	136	—	—	—	—	2	31	42	61	
Other heart disease	545	812	1357	1	—	2	3	49	182	314	806	
Other circulatory diseases	170	214	384	—	—	—	—	9	62	92	221	
Influenza	19	16	35	1	—	—	—	2	8	11	13	
Pneumonia	181	176	357	54	6	1	1	13	49	97	136	
Bronchitis	485	291	776	9	3	1	—	11	219	279	254	
Other diseases of respiratory system ..	38	17	55	1	—	2	—	4	28	13	7	
Ulcer of stomach and duodenum ..	57	29	86	1	—	—	—	5	35	23	22	
Gastritis, enteritis and diarrhoea ..	14	30	44	6	1	—	1	2	7	13	14	
Nephritis and nephrosis	27	29	56	—	—	1	1	13	23	11	7	
Hypertrophy of prostate	49	—	49	—	—	—	—	—	4	24	21	
Pregnancy, childbirth, abortion .. .	—	3	3	—	—	—	1	2	—	—	—	
Congenital malformations	40	46	86	66	6	4	—	2	5	2	1	
Other defined and ill-defined diseases ..	336	421	757	194	9	5	7	28	144	131	236	
Motor vehicle accidents	50	22	72	—	5	9	5	10	25	7	11	
All other accidents	67	51	118	12	4	11	7	22	24	15	23	
Suicide	51	38	89	—	—	—	5	19	33	18	14	
Homicide and operations of war ..	7	3	10	—	—	1	1	2	5	1	—	
TOTALS ..	4232	4243	8475	358	41	48	54	378	2250	2208	3048	

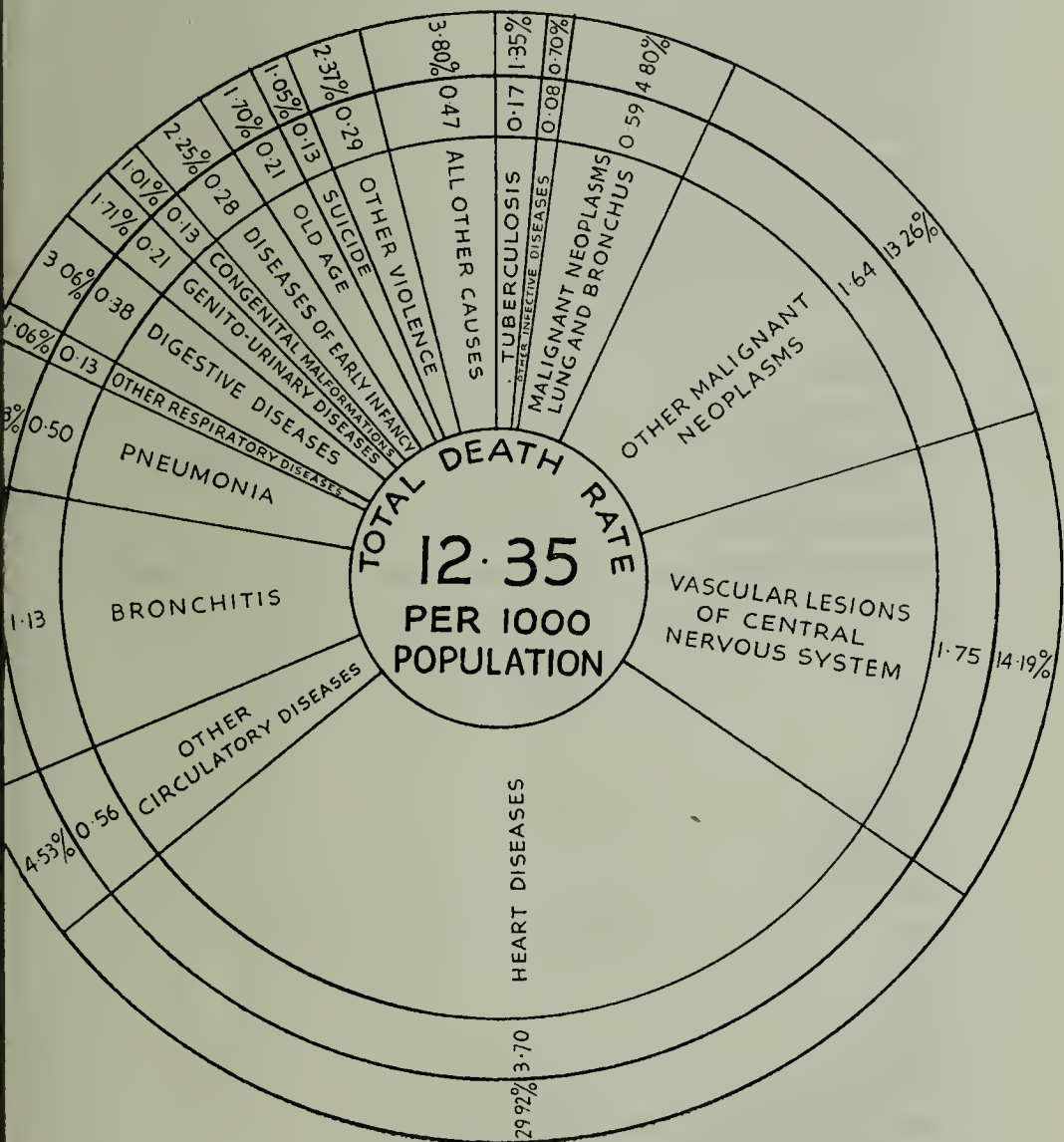
NOTE.—A table showing the mortality rates due to various causes, etc., from 1901 onwards appears at page 34A.

DEATHS FROM PRINCIPAL CAUSES

RATE PER 1000 POPULATION

AND

PERCENTAGE TO TOTAL DEATHS

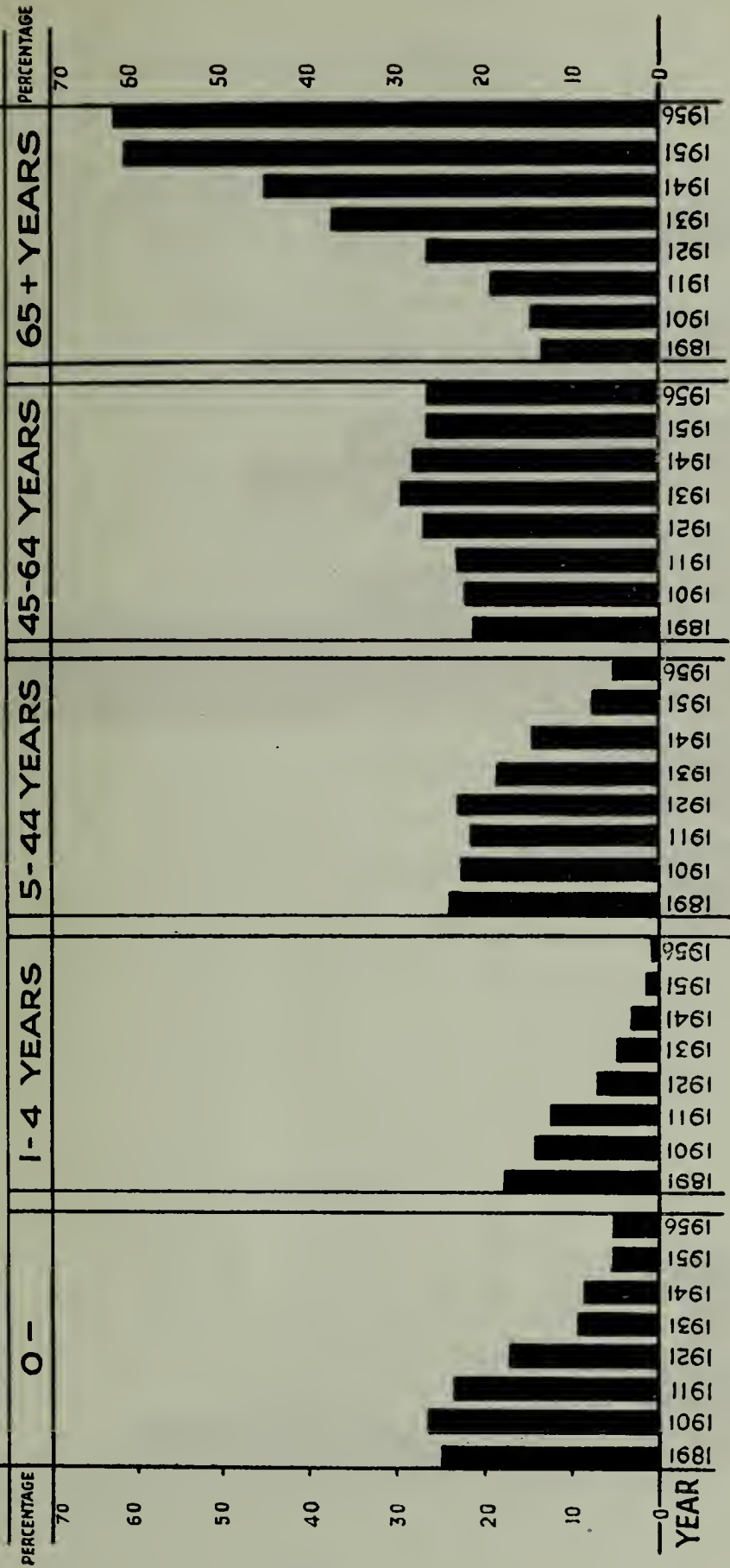


Deaths in age groups and percentages to total deaths

Year	Total number of deaths	Age groups and percentages									
		0—		1—4		5—44		45—64		65—	
		No.	%	No.	%	No.	%	No.	%	No.	%
1891 ..	13,202	3,299	24.99	2,225	16.85	3,178	24.07	2,756	20.88	1,744	13.21
1901 ..	11,801	3,114	26.39	1,676	14.20	2,725	23.09	2,627	22.26	1,659	14.06
1911 ..	12,272	2,901	23.64	1,516	12.35	2,711	22.09	2,790	22.74	2,354	19.18
1921 ..	10,093	1,707	16.91	728	7.21	2,313	22.92	2,687	26.62	2,658	26.34
1931 ..	10,618	1,027	9.67	503	4.74	1,943	18.30	3,144	29.61	4,001	37.68
1941 ..	10,016	832	8.31	265	2.65	1,467	14.65	2,886	28.81	4,566	45.58
1951 ..	9,676	439	4.54	64	0.66	748	7.73	2,568	26.54	5,857	60.53
1952 ..	8,576	424	4.94	75	0.87	637	7.43	2,410	28.10	5,030	58.66
1953 ..	8,638	373	4.32	58	0.67	602	6.97	2,349	27.19	5,256	60.85
1954 ..	8,525	349	4.09	56	0.66	585	6.86	2,293	26.90	5,242	61.49
1955 ..	8,777	332	3.78	51	0.58	539	6.14	2,280	25.98	5,575	63.52
1956 ..	8,475	358	4.22	41	0.48	480	5.67	2,250	26.55	5,346	63.08

PERCENTAGES OF DEATHS IN VARIOUS AGE GROUPS TO TOTAL DEATHS 1891 - 1956

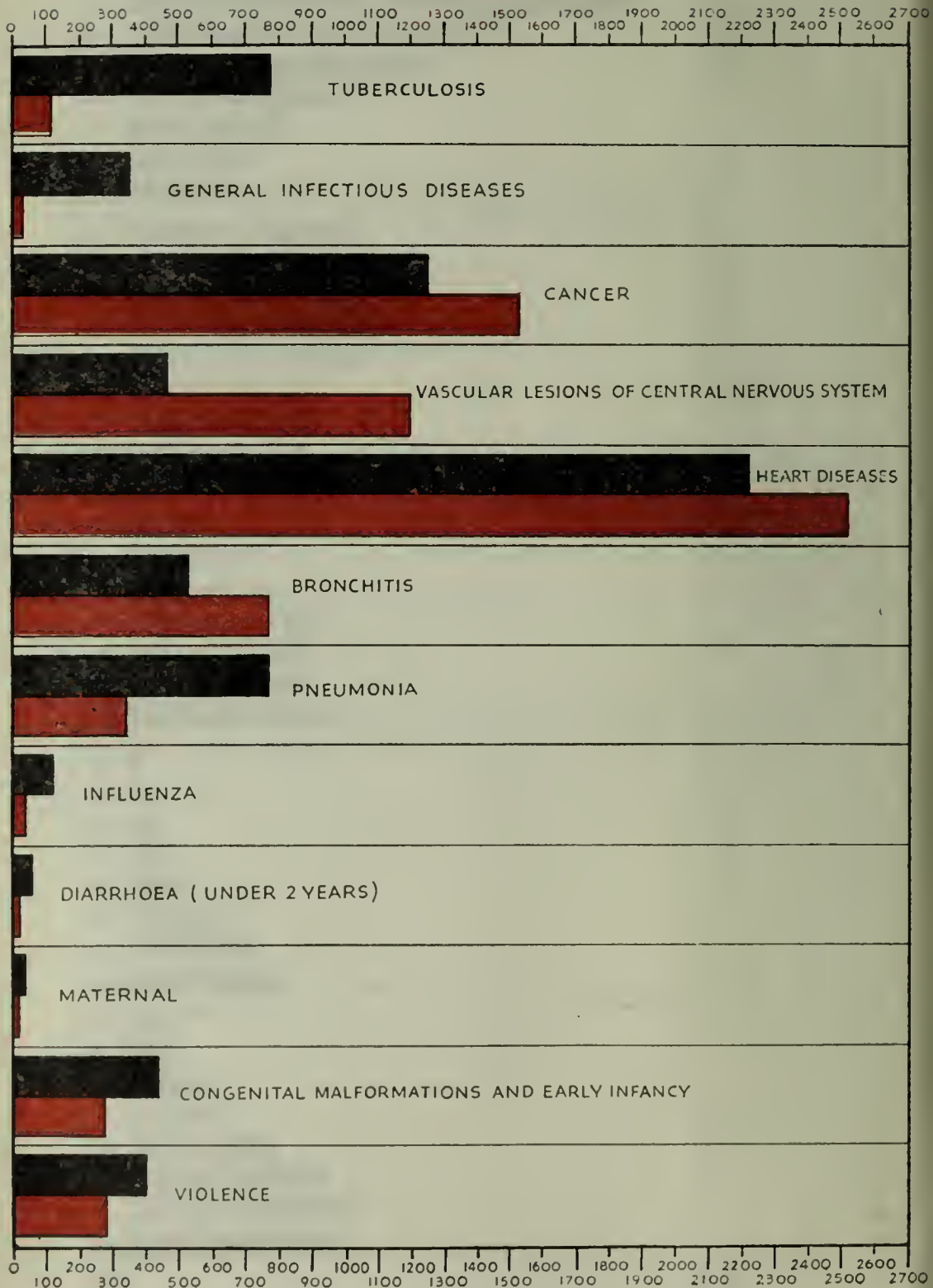
AGE GROUPS



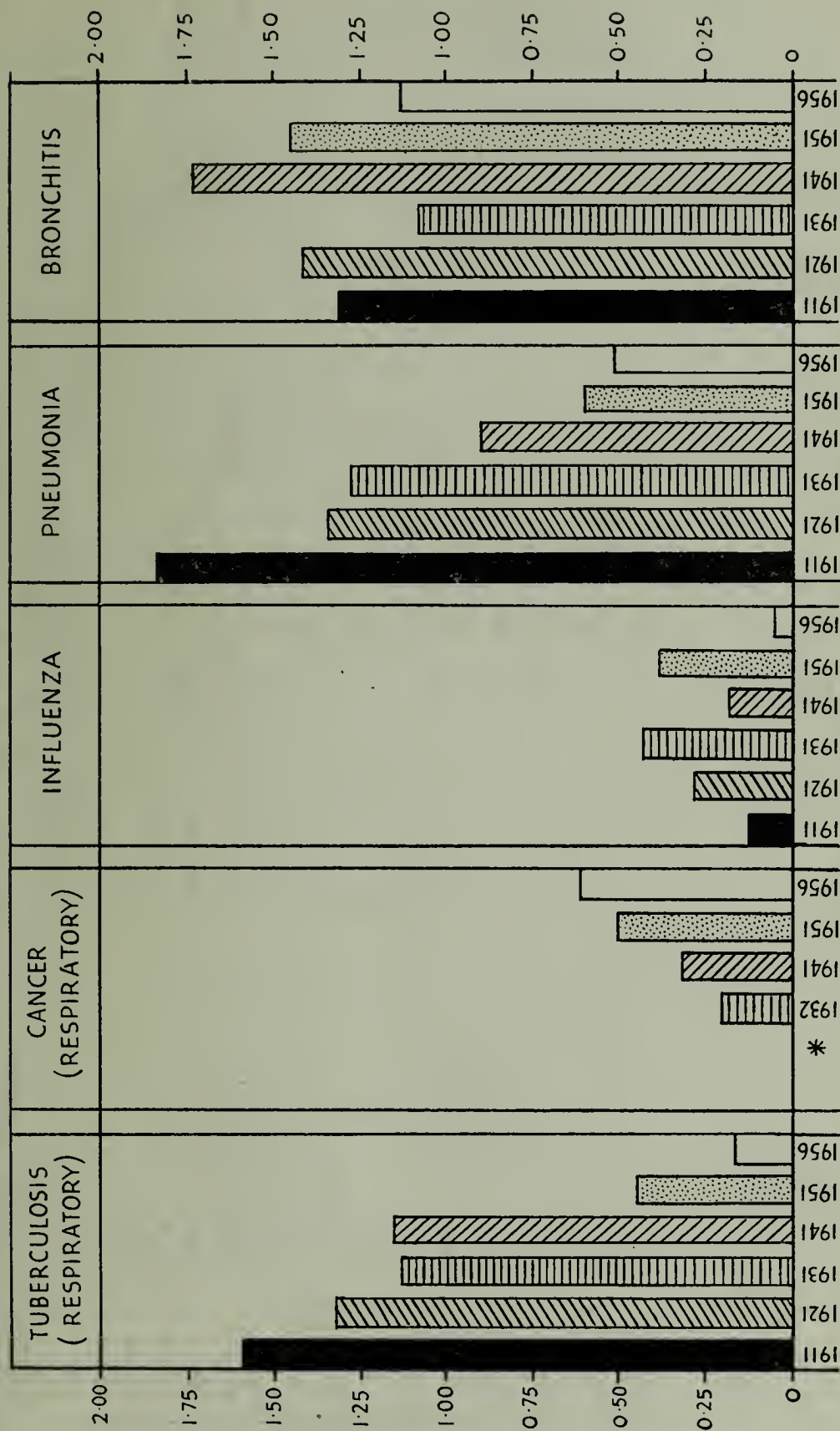
PRINCIPAL CAUSES OF DEATH

1936 IN BLACK

1956 IN RED



DEATH RATES FROM RESPIRATORY DISEASES 1911 - 1956



* NO FIGURES ARE AVAILABLE PRIOR TO 1932 FOR CANCER (RESPIRATORY)

Estimated populations, rates of marriages, births, and deaths (a) from all causes, (b) from specified causes, and (c) infant mortality; also the percentages to total deaths of inquest cases and deaths in public institutions; in quinquennial periods, 1871—1955.

Year	Estimated population (Mean)	Marriage rate per 1,000 persons living	Rates per 1,000 persons living										Percentage to total deaths		Infant mortality	Year		
			Births	Deaths (all causes)	Smallpox	Measles	Scarlet fever	Diphtheria	Whooping cough	Typhus fever	Typhoid and paratyphoid fever	Simple continued fever	Diarrhoea 4 weeks to 2 years	Violence			Inquest cases	Deaths in public institutions
1871-1875	477,344	24.6	38.9	28.3	0.26	0.64	1.08	0.08	0.78	0.14	0.43	0.21	1.95	0.94	7.2	13.4	198	.. 1871-1875
1876-1880	509,802	18.6	38.7	26.2	0.24	0.53	1.07	0.13	0.84	0.08	0.29	0.11	1.26	0.82	7.5	14.3	172	.. 1876-1880
1881-1885	542,746	17.9	35.1	23.6	0.04	0.71	0.48	0.10	0.68	0.05	0.20	0.03	0.99	0.72	7.0	15.9	175	.. 1881-1885
1886-1890	575,630	16.6	33.4	24.6	0.02	0.83	0.50	0.32	0.54	0.02	0.30	0.01	1.08	0.78	6.9	17.7	183	.. 1886-1890
1891-1895	517,801	16.9	33.2	23.6	0.03	0.62	0.26	0.27	0.64	0.00	0.24	0.01	1.19	0.77	7.1	19.2	186	.. 1891-1895
1896-1900	539,599	18.2	32.5	22.7	..	0.89	0.20	0.13	0.53	0.00	0.18	0.01	1.69	0.73	7.1	20.2	192	.. 1896-1900
1901-1905	554,355	17.4	30.9	20.1	0.01	0.55	0.19	0.22	0.41	0.00	0.13	0.00	1.15	0.72	7.1	24.4	173	.. 1901-1905
1906-1910	660,049	17.0	28.1	17.7	..	0.54	0.16	0.17	0.37	0.00	0.10	0.00	0.76	0.68	7.4	27.3	147	.. 1906-1910
1911-1915	720,565	17.9	25.3	16.5	..	0.51	0.12	0.14	0.26	..	0.06	..	0.83	0.66	7.4	29.2	133	.. 1911-1915
1916-1920	B 746,909 D 699,325	18.4	19.9	15.7	..	0.28	0.04	0.08	0.24	..	0.02	0.00	0.33	0.55	6.3	29.7	105	.. 1916-1920
1921-1925	751,080	16.8	20.6	13.9	..	0.25	0.07	0.10	0.21	..	0.01	..	0.31	0.45	5.7	37.4	96	.. 1921-1925
1926-1930	752,840	16.6	17.5	13.9	..	0.18	0.02	0.11	0.14	..	0.01	..	0.29	0.50	4.8	42.8	88	.. 1926-1930
1931-1935	759,180	17.1	15.3	13.4	..	0.11	0.02	0.10	0.08	..	0.00	..	0.15	0.54	4.8	48.3	77	.. 1931-1935
1936-1940	712,660	21.4	15.2	14.3	..	0.07	0.00	0.09	0.04	..	0.00	..	0.10	0.70	4.9	52.0	71	.. 1936-1940
1941-1945	608,256	20.9	18.1	15.0	..	0.02	0.00	0.04	0.06	..	0.00	..	0.15	0.68	5.1	50.7	64	.. 1941-1945
1946-1950	690,264	20.2	20.1	13.1	..	0.01	..	0.00	0.04	..	0.00	..	0.16	0.40	3.6	45.3	48	.. 1946-1950
1951-1955	699,660	18.3	17.3	12.6	..	0.00	0.00	0.00	0.01	..	..	..	0.02	0.43	3.7	46.0	31	.. 1951-1955

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken as approximately representing "Manchester." The City was extended to include Moss Side and Withington in November, 1904, Gorton and Levenshulme in November, 1909, and Wythenshawe in April, 1931.

From 1911 population and rates based on Registrar-General's returns.

(B)—Population for calculating birth-rates.

(D)—Population for calculating death-rates.

..—Signifies there were no deaths.

Quinquennial rates of mortality from certain causes of death.

YEAR	RATES PER 1,000 PERSONS LIVING								RATES PER 1,000 BIRTHS*	
	Malignant neoplasms	Tuberculosis of respiratory system	Other forms of tuberculosis	Diseases of nervous system	Diseases of heart and circulatory system	Diseases of respiratory system	Diseases of digestive system	Nephritis and nephrosis	Puerperal and post abortive sepsis	Other puerperal causes
1881-1885	0.50	2.42	0.92	3.28	1.37	5.41	1.23	..	3.03	1.99
1886-1890	0.64	2.24	0.95	3.09	1.73	5.76	1.23	..	3.22	2.13
1891-1895	0.62	2.09	0.97	1.74	2.53	5.56	1.07	..	2.75	3.42
1896-1900	0.73	2.04	0.82	1.32	2.54	5.03	1.04	..	1.55	1.51
1901-1905	0.80	1.91	0.71	1.17	1.74	4.24	1.87	0.41	1.21	1.76
1906-1910	0.88	1.66	0.59	0.95	1.72	3.77	1.42	0.44	1.28	1.49
1911-1915	1.04	1.67	0.47	0.79	1.24	3.62	1.44	0.46	1.42	2.56
1916-1920	1.21	1.61	0.41	0.54	1.21	3.41	0.84	0.41	1.70	2.14
1921-1925	1.36	1.27	0.30	0.51	1.39	3.11	0.74	0.34	1.83	2.10
1926-1930	1.50	1.19	0.21	0.48	1.81	2.65	0.75	0.36	2.14	2.63
1931-1935	1.67	1.02	0.16	0.41	2.50	1.97	0.55	0.37	*1.59	*2.20
1936-1940	1.81	0.93	0.14	0.38	3.10	2.07	0.53	0.37	1.11	2.40
1941-1945	2.10	0.93	0.14	†1.62	3.10	2.39	0.65	0.37	0.71	1.30
1946-1950	1.99	0.64	0.08	1.53	3.20	1.99	0.57	0.26	0.30	0.88
1951-1955	2.20	0.31	0.03	1.77	4.20	1.95	0.42	0.11	0.18	0.67

* Maternal mortality rates until 1930 were based on per 1,000 live births. From 1931 onwards these rates were calculated on per 1,000 live and stillbirths.

† Diseases of nervous system includes cerebral hæmorrhage from 1941. From 1911 rates are based on Registrar General's returns.

Ward population, area, density, births and deaths, with birth, death, and infant mortality rates
(figures compiled in the Health Department)

WARDS	Estimated population	Area in acres	Persons per acre	Live births		Deaths		Natural rate of increase	Deaths under 1 year per 1,000 live births
				Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.		
CITY OF MANCHESTER ..	686200	27255	25.18	11967	17.44	8475	12.35	+ 5.09	29.92
Alexandra Park ..	21086	780	27.03	262	12.43	260	12.33	+ 0.10	22.90
All Saints ..	17534	315	55.66	551	31.42	206	11.75	+ 19.67	27.22
Ardwick ..	16899	436	38.76	442	26.16	213	12.60	+ 13.56	29.41
Baguley ..	18515	1405	13.18	376	20.31	124	6.70	+ 13.61	5.32
Barlow Moor ..	15401	1120	13.75	158	10.26	359	23.31	- 13.05	25.32
Benchill ..	18248	1027	17.77	360	19.73	168	9.21	+ 10.52	27.78
Beswick..	18707	243	76.98	352	18.82	224	11.97	+ 6.85	39.77
Blackley ..	21800	1226	17.78	324	14.86	243	11.15	+ 3.71	27.78
Bradford ..	22051	772	28.56	373	16.92	253	11.47	+ 5.45	26.81
Burnage ..	21603	737	29.31	214	9.91	229	10.60	- 0.69	14.02
Cheetham ..	13628	446	30.56	236	17.32	176	12.91	+ 4.41	25.42
Chorlton-cum-Hardy ..	19706	849	23.21	162	8.22	247	12.53	- 4.31	61.73
Collegiate Church ..	12851	501	25.65	260	20.23	230	17.90	+ 2.33	34.62
Crumpsall ..	23215	1805	12.86	297	12.79	359	15.46	- 2.67	40.40
Didsbury ..	17506	1181	14.82	232	13.25	236	13.48	- 0.23	25.86
Gorton North ..	22444	540	41.56	345	15.37	269	11.99	+ 3.38	40.58
Gorton South ..	16948	631	26.86	197	11.62	216	12.74	- 1.12	15.23
Harpurhey ..	17532	372	47.13	326	18.59	229	13.06	+ 5.53	21.47
Hugh Oldham ..	17383	498	34.91	445	25.60	228	13.12	+ 12.48	26.97
Levenshulme ..	18709	606	30.87	223	11.92	236	12.19	- 0.27	26.91
Lighthowne ..	19444	390	49.86	245	12.60	236	12.14	+ 0.46	28.57
Longsight ..	14918	355	42.02	271	18.17	169	11.33	+ 6.84	7.38
Miles Platting ..	14835	444	31.16	280	20.24	179	12.94	+ 7.30	25.00
Moss Side East ..	18183	65.64	65.64	502	27.61	205	11.27	+ 16.34	29.88
Moss Side West ..	17345	268	64.72	393	22.66	243	14.01	+ 8.65	35.62
Moston ..	20358	1170	17.40	291	14.29	264	12.97	+ 1.32	44.67
New Cross ..	13053	354	36.87	292	22.37	207	15.86	+ 6.51	34.25
Newton Heath ..	18399	905	20.33	249	13.53	256	13.91	- 0.38	24.10
Northenden ..	20974	1763	11.90	352	16.78	207	9.87	+ 6.91	25.57
Old Moat ..	16827	624	26.97	198	11.77	205	12.18	- 0.41	25.25
Openshaw ..	22005	543	40.52	337	15.31	279	12.68	+ 2.63	44.51
Rusholme ..	16663	726	22.95	246	14.76	209	12.54	+ 2.22	20.33
St. George's ..	17809	318	56.00	433	24.31	236	13.25	+ 11.06	46.19
St. Luke's ..	17364	287	60.50	489	28.16	262	15.09	+ 13.07	34.76
St. Mark's ..	20486	517	39.62	328	16.01	250	12.20	+ 3.81	42.68
St. Peter's ..	10628	837	12.70	149	14.02	86	8.09	+ 5.93	33.56
Withington ..	15314	560	27.35	208	13.58	161	10.51	+ 3.07	33.65
Woodhouse Park ..	20829	1427	14.60	569	27.32	124	5.95	+ 21.37	28.12

Deaths in wards for various diseases and death rates per 1,000 of the population
(figures compiled in the Health Department)

WARDS	ESTIMATED POPULATION	WHOOPING COUGH		DIPHTHERIA		MEASLES		TUBERCULOSIS ALL FORMS		SYPHILITIC DISEASES		DISEASES OF CIRCULATORY SYSTEM		*MALIGNANT NEOPLASMS		PNEUMONIA		BRONCHITIS		DIGESTIVE SYSTEM		GENITO URINARY SYSTEM		ALL CAUSES	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
CITY OF MANCHESTER..	686200	—	—	—	—	—	—	114	0·17	26	0·04	2920	4·26	1531	2·23	346	0·50	776	1·13	259	0·38	145	0·21	8475	12·35
Alexandra Park	21086	—	—	—	—	—	—	2	0·09	1	0·05	90	4·27	51	2·42	13	0·62	21	1·00	12	0·57	4	0·19	260	12·33
All Saints	17534	—	—	—	—	—	—	3	0·17	—	—	74	4·22	39	2·22	6	0·34	14	0·80	2	0·11	1	0·06	206	11·75
Ardwick	16899	—	—	—	—	—	—	3	0·18	1	0·06	74	4·38	39	2·31	9	0·53	21	1·24	4	0·24	3	0·18	213	12·60
Baguley	18515	—	—	—	—	—	—	3	0·16	1	0·05	37	2·00	29	1·57	1	0·05	9	0·49	4	0·22	2	0·11	124	6·70
† Barlow Moor	15401	—	—	—	—	—	—	2	0·13	1	0·06	139	9·03	29	1·88	25	1·62	30	1·95	10	0·65	4	0·26	359†	23·31
Benchill	18248	—	—	—	—	—	—	5	0·27	—	—	50	2·74	27	1·48	4	0·22	13	0·71	5	0·27	4	0·22	168	9·21
Beswick	18707	—	—	—	—	—	—	4	0·21	1	0·05	65	3·47	37	1·98	14	0·75	30	1·60	8	0·43	3	0·16	224	11·97
Blackley	21800	—	—	—	—	—	—	4	0·18	1	0·05	84	3·85	51	2·34	6	0·28	30	1·38	11	0·50	2	0·09	243	11·15
Bradford	22051	—	—	—	—	—	—	4	0·18	—	—	82	3·72	41	1·86	9	0·41	29	1·32	15	0·68	3	0·14	253	11·47
Burnage	21603	—	—	—	—	—	—	—	—	2	0·09	83	3·84	47	2·18	9	0·42	16	0·74	4	0·19	5	0·23	229	10·60
Cheetham	13628	—	—	—	—	—	—	3	0·22	—	—	60	4·40	39	2·86	9	0·66	12	0·88	7	0·51	3	0·22	176	12·91
Chorlton-cum-Hardy	19706	—	—	—	—	—	—	2	0·10	—	—	93	4·72	34	1·73	8	0·41	11	0·56	13	0·66	3	0·15	247	12·53
Collegiate Church	12851	—	—	—	—	—	—	6	0·47	1	0·08	70	5·45	41	3·19	12	0·93	22	1·71	9	0·70	4	0·31	230	17·90
† Crumpsall	23215	—	—	—	—	—	—	2	0·09	2	0·09	138	5·94	52	2·24	16	0·69	30	1·29	10	0·43	11	0·47	359†	15·46
Didsbury	17506	—	—	—	—	—	—	2	0·11	—	—	80	4·57	45	2·57	11	0·63	15	0·86	7	0·40	6	0·34	236	13·48
Gorton North	22444	—	—	—	—	—	—	2	0·09	—	—	91	4·05	50	2·23	5	0·22	27	12·0	6	0·27	4	0·18	269	11·99
Gorton South	16948	—	—	—	—	—	—	5	0·30	1	0·06	69	4·07	49	2·89	8	0·47	22	1·30	6	0·35	7	0·41	216	12·74
Harpurhey	17532	—	—	—	—	—	—	2	0·11	1	0·06	87	4·96	46	2·62	5	0·29	27	1·54	2	0·11	4	0·23	229	13·06
Hugh Oldham	17383	—	—	—	—	—	—	2	0·12	2	0·12	65	3·74	46	2·65	14	0·81	34	1·96	2	0·12	3	0·17	228	13·12
Levenshulme	18709	—	—	—	—	—	—	4	0·21	2	0·11	88	4·70	39	2·08	9	0·48	18	0·96	4	0·21	2	0·11	228	12·19
Lightbowne	19444	—	—	—	—	—	—	—	—	—	—	92	4·73	37	1·90	8	0·41	18	0·93	11	0·57	4	0·21	236	12·14
Longsight	14918	—	—	—	—	—	—	3	0·20	—	—	78	5·23	32	2·15	3	0·20	7	0·47	2	0·13	3	0·20	169	11·33
Miles Platting	13835	—	—	—	—	—	—	3	0·22	1	0·07	39	2·82	42	3·04	10	0·72	22	1·59	5	0·36	3	0·22	179	12·94
Moss Side East	18183	—	—	—	—	—	—	2	0·11	1	0·05	76	4·18	43	2·36	7	0·38	17	0·93	2	0·11	3	0·16	205	11·27
Moss Side West	17345	—	—	—	—	—	—	2	0·12	1	0·06	79	4·55	41	2·36	11	0·63	22	1·27	10	0·58	7	0·40	243	14·01
Moston	20358	—	—	—	—	—	—	2	0·10	—	—	89	4·37	47	2·31	4	0·20	26	1·28	12	0·59	6	0·29	264	12·97
New Cross	13053	—	—	—	—	—	—	3	0·23	—	—	76	5·82	36	2·76	9	0·69	24	1·84	10	0·77	4	0·31	207	15·86
Newton Heath	18399	—	—	—	—	—	—	5	0·27	—	—	102	5·54	49	2·66	8	0·43	25	1·36	3	0·16	4	0·22	256	13·91
Northenden	20974	—	—	—	—	—	—	4	0·19	1	0·05	68	3·24	37	1·76	9	0·43	16	0·76	3	0·14	3	0·14	207	9·87
Old Moat	16827	—	—	—	—	—	—	5	0·30	—	—	66	3·92	50	2·97	10	0·59	13	0·77	8	0·48	3	0·18	205	12·18
Openshaw	22005	—	—	—	—	—	—	4	0·18	—	—	91	4·14	56	2·54	7	0·32	35	1·59	11	0·50	5	0·23	279	12·68
Rusholme	16663	—	—	—	—	—	—	2	0·12	—	—	86	5·16	38	2·28	9	0·54	18	1·08	6	0·36	3	0·18	209	12·54
St. George's	17809	—	—	—	—	—	—	4	0·22	3	0·17	58	3·26	39	2·19	16	0·90	36	2·02	7	0·39	8	0·45	236	13·25
St. Luke's	17364	—	—	—	—	—	—	5	0·29	—	—	91	5·24	41	2·36	20	1·15	13	0·75	12	0·69	4	0·23	262	15·09
St. Mark's	20486	—	—	—	—	—	—	3	0·15	1	0·05	83	4·05	34	1·66	8	0·39	30	1·46	8	0·39	1	0·05	250	12·20
St. Peter's	10628	—	—	—	—	—	—	3	0·28	—	—	27	2·54	17	1·60	6	0·56	7	0·66	5	0·47	3	0·28	86	8·09
Withington	15314	—	—	—	—	—	—	1	0·07	—	—	65	4·24	30	1·96	6	0·39	7	0·46	3	0·20	2	0·13	161	10·51
Woodhouse Park	20829	—	—	—	—	—	—	3	0·14	1	0·05	35	1·68	31	1·49	2	0·10	9	0·43	—	—	1	0·05	124	5·95

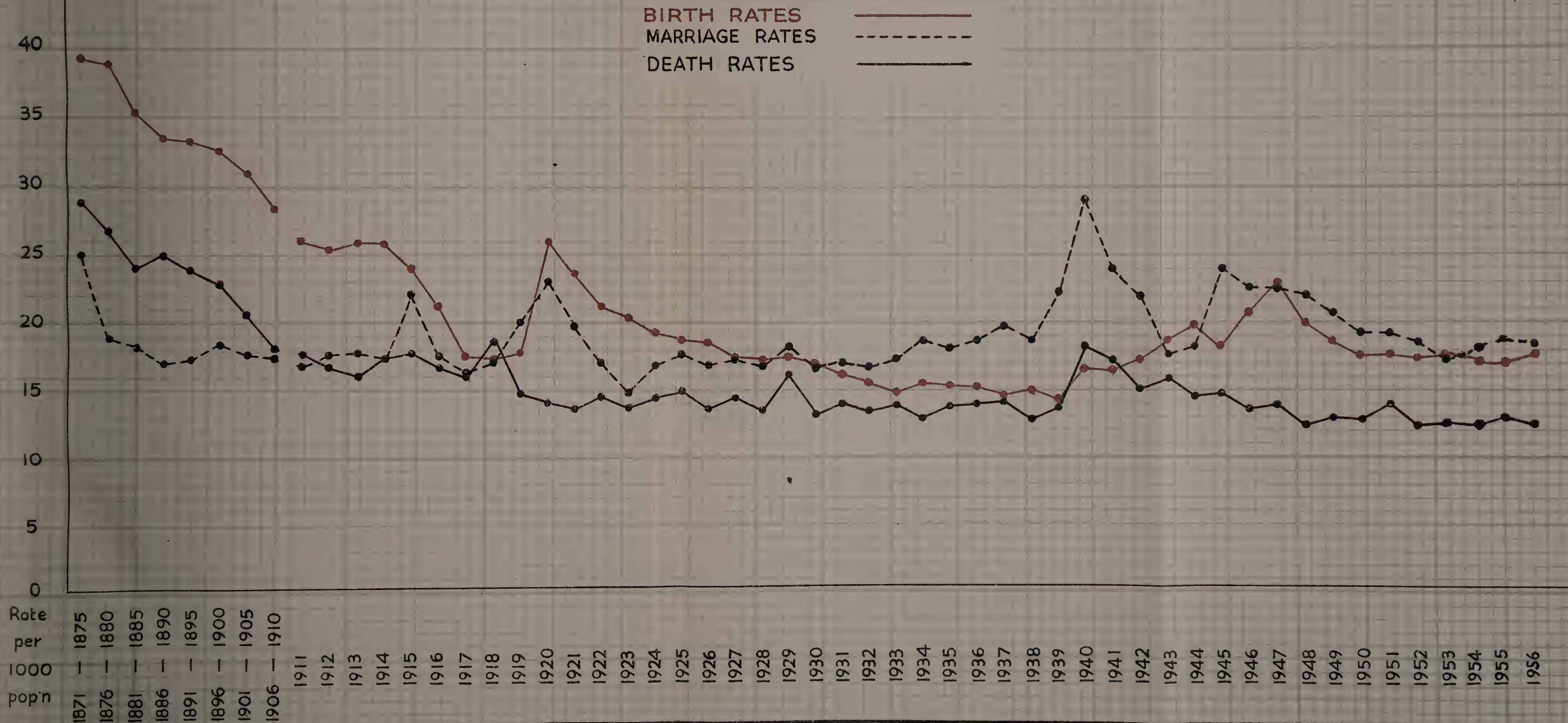
NOTE—* Includes neoplasms of lymphatic and haematopoietic tissues.

† Deaths in Barlow Moor and Crumpsall wards include the following numbers in non-transferable institu

s — Barlow Moor 219
Crumpsall 131

BIRTH, MARRIAGE AND DEATH RATES 1871—1956

Per 1000 of the population



DEATH RATE 1871-1956

Per 1000 of the population



STATE OF NEW YORK

IN SENATE

JANUARY 1881

REPORT OF THE

COMMISSIONERS OF THE LAND OFFICE

IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE

APRIL 1880

ALBANY: PUBLISHED BY THE STATE OF NEW YORK

1881

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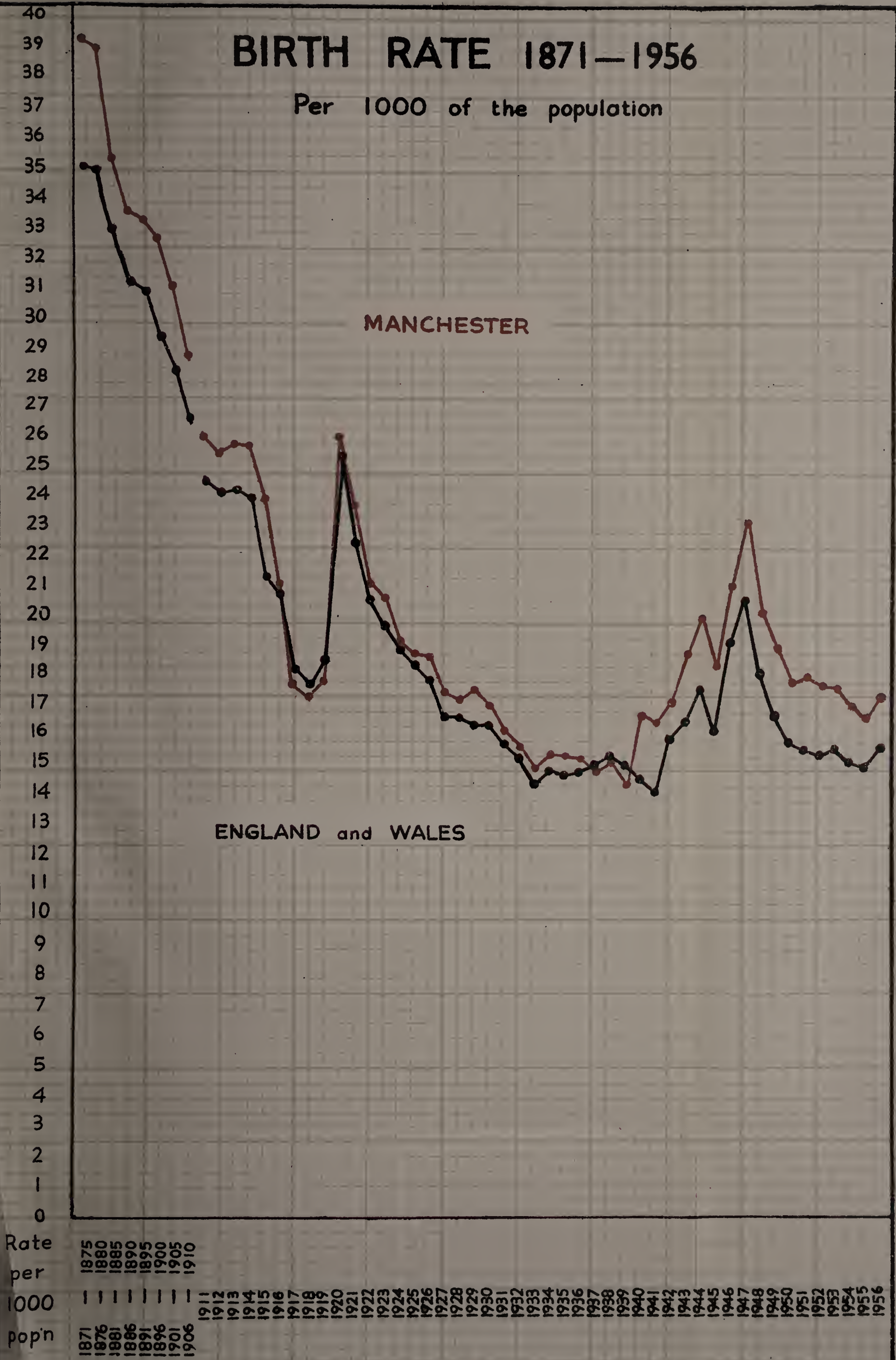
PRINTED BY THE STATE OF NEW YORK

BIRTH RATE 1871—1956

Per 1000 of the population

MANCHESTER

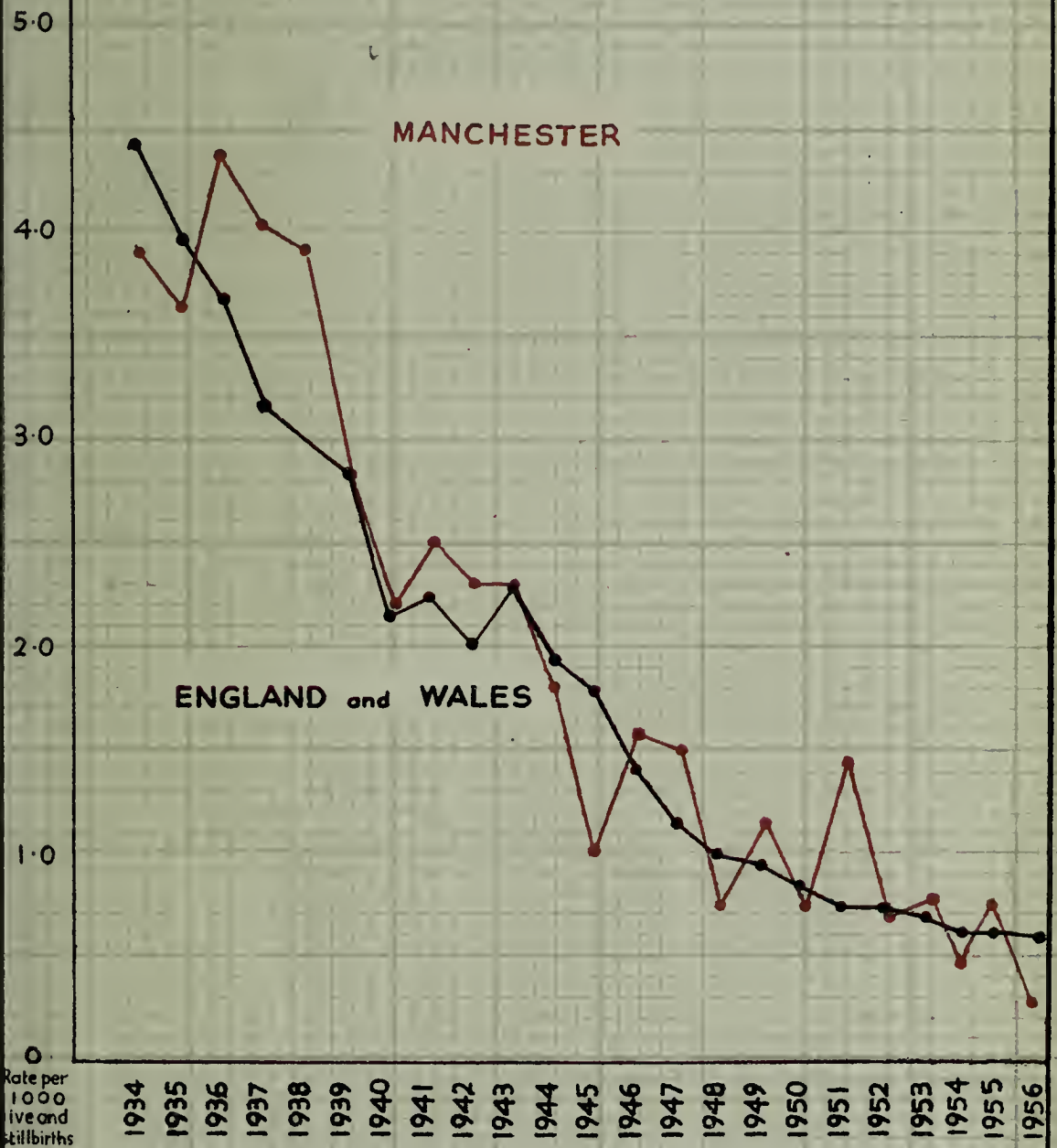
ENGLAND and WALES





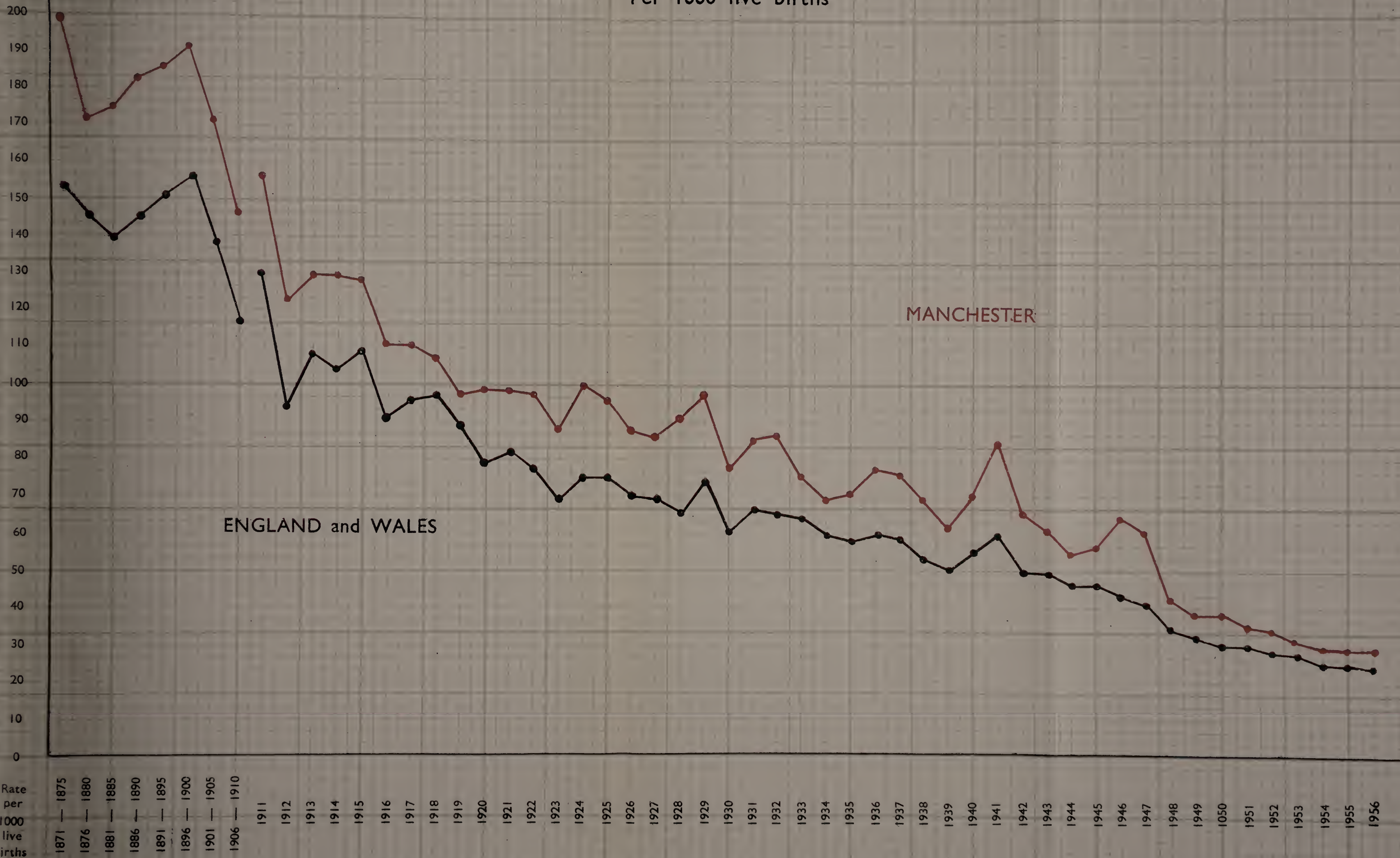
MATERNAL MORTALITY 1934-1956

Mortality per 1000 live and stillbirths



INFANT MORTALITY 1871—1956

Per 1000 live births



CAUSE OF DEATH	Under 1 year					1 to 5 years					Total under 5 Years
	Under 4 weeks	4 weeks to 3 months	3-6 months	6-12 months	Total	1-2 years	2-3 years	3-4 years	4-5 years	Total	
Tuberculosis, respiratory	—	—	—	—	—	—	—	—	—	—	1
" meninges and central nervous system	—	—	—	—	—	1	—	—	—	—	—
" intestine, peritoneum and mesenteric glands	—	—	—	—	—	—	—	—	—	—	—
" other	—	—	—	—	—	—	—	—	—	—	—
Syphilitic diseases	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—
Scarlet fever	—	—	—	—	—	—	—	—	—	—	—
Whooping cough	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	1	1	—	—	—	—	—	1
Acute poliomyelitis	—	—	1	6	7	2	—	—	—	2	9
Meningococcal infections	—	—	—	—	—	—	—	—	—	—	—
Acute infectious encephalitis	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—
Food poisoning	—	—	—	—	—	—	—	—	—	—	—
Meningitis (not tubercular)	—	—	1	1	2	—	—	—	—	—	—
Other diseases of nervous system	—	2	1	1	3	2	1	—	—	3	1
Influenza	—	1	—	—	1	—	—	—	—	—	1
Pneumonia, broncho	—	22	12	7	41	4	1	—	—	5	46
" lobar	—	1	—	—	1	—	—	—	—	—	1
" other	—	1	—	—	1	—	—	—	—	—	1
Bronchitis	—	3	3	—	6	1	—	—	—	2	12
Other respiratory diseases	—	1	—	3	4	2	1	—	—	3	11
Diarrhoea (4 weeks-2 years)	—	3	1	1	5	1	—	—	—	2	6
Other diseases of digestive system	—	2	1	—	3	—	—	—	—	—	—
Congenital malformations	4	11	11	7	33	3	2	1	—	6	72
Birth injury, with immaturity	37	—	—	—	37	—	—	—	—	—	37
" without immaturity	7	—	—	—	7	—	—	—	—	—	7
" with immaturity	22	—	—	—	22	—	—	—	—	—	22
Atelectasis, with immaturity	33	—	—	—	33	—	—	—	—	—	33
" without immaturity	16	1	—	—	17	—	—	—	—	—	17
Pneumonia of newborn with immaturity	3	—	—	—	3	—	—	—	—	—	3
" without immaturity	8	—	—	—	8	—	—	—	—	—	8
Diarrhoea of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
" without immaturity	1	—	—	—	1	—	—	—	—	—	1
Other infections of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
" without immaturity	—	—	—	—	—	—	—	—	—	—	—
" newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
Haemolytic disease of newborn with immaturity	2	—	—	—	2	—	—	—	—	—	2
" without immaturity	11	—	—	—	11	—	—	—	—	—	11
Other "diseases of early infancy with immaturity	11	—	—	—	11	—	—	—	—	—	11
" without immaturity	6	—	—	—	6	—	—	—	—	—	6
Immaturity, unqualified	69	1	—	—	70	—	—	—	—	—	70
Suffocation (overlain)	—	1	—	—	1	—	—	—	—	—	1
Other violence	5	—	5	—	10	1	4	3	1	9	19
Other causes	6	2	—	2	10	—	4	2	2	8	18
All causes	241	52	36	29	358	18	13	7	3	41	399

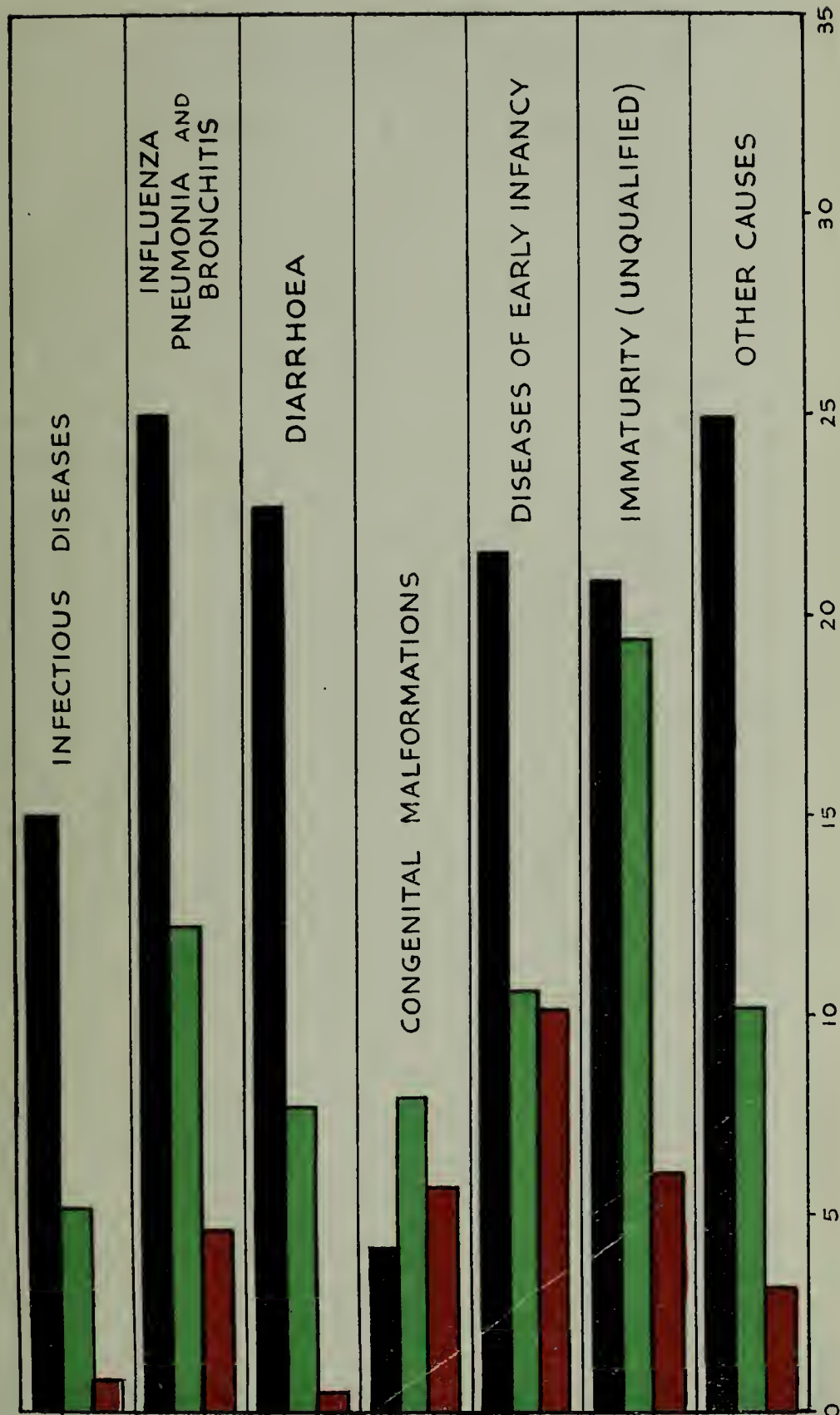
Infant mortality
Deaths from various causes per 1,000 live births
1952-56

Cause of death	Rate per 1,000 live births				
	1952	1953	1954	1955	1956
All causes	34.28	30.53	29.47	28.37	29.92
Tuberculosis respiratory .. .. .	..	..	..	..	..
,, other	0.08	..	0.08	..	..
Syphilitic diseases	0.16	..	..	..	..
Scarlet fever .. .. .	..	..	0.08	..	..
Diphtheria .. .. .	..	..	..	..	..
Whooping cough	0.40	0.24	0.08	0.17	..
Meningococcal infections .. .. .	..	0.24	0.08	0.26	0.59
Acute poliomyelitis .. .. .	..	..	..	..	0.08
Acute infectious encephalitis .. .. .	..	..	..	..	..
Measles	0.08	..	0.08	..	..
Diseases of the nervous system	0.24	0.08	0.42	0.17	0.42
Influenza .. .. .	..	0.08	0.08	..	0.08
Pneumonia (over 4 weeks of age)	4.12	3.03	2.36	3.59	3.59
Bronchitis	0.81	1.15	1.27	0.77	0.75
Other respiratory diseases	0.24	0.33	0.42	0.26	0.08
Diarrhoeal diseases	1.54	0.74	0.93	0.51	0.42
Other digestive diseases	0.57	0.74	0.34	0.94	0.59
Nephritis and nephrosis .. .. .	..	..	..	..	..
Congenital malformations	6.23	4.34	6.84	6.15	5.52
Birth injuries	3.48	3.60	3.72	2.65	2.42
Other diseases of early infancy	7.36	6.87	7.60	6.07	7.69
Immaturity, unqualified	6.95	6.96	4.39	5.30	5.85
Violence	1.05	1.23	0.08	0.68	1.00
All other causes	0.97	0.90	0.62	0.85	0.84

1910 1914 IN BLACK

1934 - 1938 IN GREEN

1956 IN RED



Deaths under one year of age from diarrhoea, congenital malformations, diseases of early infancy and other causes 1937-1956

Year	Diarrhoea		Congenital malformations		Injury at birth		Atelectasis		Others of early infancy		Immaturity unqualified		Other causes		Total deaths	Infant mortality rate per 1,000 live births
	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births		
1937..	89	8.3	93	8.6	44	4.1	18	1.7	44	4.1	213	19.7	322	29.8	823	76.3
1938..	100	9.1	87	7.9	29	2.6	25	2.3	47	4.3	192	17.4	281	25.4	761	69.0
1939..	60	5.8	83	8.0	31	3.0	29	2.8	47	4.5	161	15.5	223	21.5	634	61.1
1940..	70	6.7	92	8.9	25	2.4	16	1.5	56	5.4	146	14.1	324	31.2	729	70.2
1941..	109	11.1	81	8.2	23	2.3	22	2.2	44	4.5	176	17.9	377	38.3	832	84.5
1942..	88	8.6	86	8.4	20	1.9	19	1.8	43	4.2	187	18.2	220	21.4	663	64.5
1943..	85	7.6	80	7.2	36	3.2	12	1.1	49	4.4	167	14.9	252	22.5	681	60.9
1944..	72	5.9	82	6.7	28	2.3	18	1.5	49	4.0	164	13.4	241	19.8	654	53.6
1945..	83	7.3	82	7.2	42	3.7	24	2.1	41	3.6	129	11.4	233	20.5	634	55.8
1946..	167	12.0	118	8.4	40	2.9	47	3.4	38	2.7	193	13.8	287	20.5	890	63.7
1947..	223	14.1	90	5.7	37	2.3	57	3.6	49	3.1	181	11.4	309	19.6	946	59.8
1948..	57	4.1	72	5.2	45	3.3	49	3.6	22	1.6	104	7.5	232	16.8	581	42.1
1949..	57	4.3	63	4.8	45	3.4	47	3.6	25	1.9	70	5.3	195	14.9	502	38.2
1950..	38	3.0	67	5.4	43	3.5	58	4.7	41	3.3	81	6.5	143	11.5	471	37.9
1951..	30	2.4	56	4.5	47	3.8	73	5.9	34	2.7	60	4.8	139	11.2	439	35.3
1952..	19	1.5	77	6.2	43	3.5	65	5.3	26	2.1	86	7.0	108	8.7	424	34.3
1953..	9	0.7	53	4.3	44	3.6	51	4.2	33	2.7	85	7.0	98	8.0	373	30.5
1954..	11	0.9	81	6.8	44	3.7	53	4.5	37	3.1	52	4.4	71	6.1	349	29.5
1955..	6	0.5	72	6.2	31	2.6	43	3.7	28	2.4	62	5.3	90	7.7	332	28.4
1956..	5	0.4	66	5.5	29	2.4	50	4.2	42	3.5	70	5.9	96	8.0	358	29.9

ILLEGITIMATE BIRTHS

Per 100 total live births

MANCHESTER

ENGLAND and WALES

Rate
per
100
live
births

1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955



Year	LIVE BIRTHS			DEATHS UNDER ONE YEAR OF AGE										
	Legitimate	Illegitimate	Total	Illegitimate percentage of total live births	Illegitimate percentage of total live births England & Wales	Number			Rate per 1,000 related live births					
						Legitimate	Illegitimate	Total	Legitimate	Illegitimate	Total			
1917	12,195	742	12,937	5.74	5.56	1,262	176	1,438	103.48	237.20	111.15	90.3	201.1	96.5
1918	12,053	873	12,926	6.75	6.21	1,201	180	1,381	100.00	206.19	106.83	91.3	185.6	97.2
1919	12,758	928	13,686	6.78	6.05	1,175	160	1,333	91.94	172.41	97.40	83.7	172.8	89.1
1920	18,253	960	19,213	4.99	4.62	1,169	213	1,882	64.04	221.88	97.95	76.2	156.1	79.9
1921	16,647	902	17,549	5.14	4.52	1,542	171	1,713	92.65	189.58	97.61	79.2	158.3	82.8
1922	15,013	774	15,787	4.90	4.38	1,375	150	1,525	91.59	193.80	96.60	74.2	138.7	77.0
1923	14,677	711	15,388	4.64	4.16	1,243	117	1,360	84.69	164.56	88.35	66.6	131.8	69.4
1924	13,826	657	14,483	4.54	4.15	1,316	138	1,454	95.18	210.05	100.39	72.6	133.0	75.1
1925	13,493	669	14,162	4.72	4.07	1,251	113	1,364	92.72	168.91	96.31	72.5	135.6	75.0
1926	13,290	679	13,969	4.86	4.26	1,116	100	1,216	83.97	147.28	87.05	67.6	129.6	70.2
1927	12,388	648	13,036	4.97	4.35	1,032	90	1,122	83.31	138.89	86.07	67.4	119.8	69.7
1928	12,256	646	12,902	5.01	4.50	1,084	95	1,179	88.44	147.06	91.38	62.7	114.8	65.1
1929	12,380	678	13,058	5.19	4.55	1,144	128	1,272	92.41	188.79	97.41	71.9	125.9	74.4
1930	12,178	673	12,851	5.24	4.57	881	114	995	72.34	169.39	77.43	57.8	104.7	60.0
1931	11,694	643	12,337	5.21	4.44	956	93	1,049	81.75	144.64	85.03	64.3	110.7	66.3
1932	11,206	619	11,825	5.24	4.39	934	81	1,015	83.35	130.86	85.83	62.9	112.7	65.0
1933	10,582	574	11,156	5.15	4.37	769	65	834	72.67	113.24	74.76	61.7	107.5	63.7
1934	10,974	581	11,555	5.03	4.31	742	56	798	67.61	96.39	69.06	56.9	95.4	58.6
1935	10,842	537	11,379	4.72	4.19	757	52	809	69.82	96.83	71.09	55.5	89.5	56.9
1936	10,681	550	11,231	4.90	4.11	816	47	863	76.40	85.45	76.84	57.3	88.1	58.5
1937	10,268	518	10,786	4.80	4.15	770	53	823	74.99	102.32	76.30	56.3	88.0	57.6
1938	10,468	557	11,025	5.05	4.25	702	59	761	67.06	105.92	69.03	51.4	80.8	52.7
1939	9,807	571	10,378	5.50	4.19	587	47	634	59.85	82.31	61.09	48.6	89.8	50.4
1940	9,873	515	10,388	4.96	4.26	677	52	729	68.57	100.97	70.18	55.6	82.4	55.8
1941	9,239	610	9,849	6.19	5.36	767	65	832	83.02	106.56	84.47	58.8	82.3	58.8
1942	9,680	596	10,276	5.80	6.00	621	42	663	64.15	70.47	64.52	49.2	75.0	49.3
1943	10,431	754	11,185	6.74	6.38	625	56	681	59.92	74.27	60.88	47.6	71.4	49.0
1944	11,239	965	12,204	7.91	7.34	577	77	654	51.34	79.79	53.59	43.7	68.5	44.5
1945	10,175	1,187	11,362	10.45	9.33	557	77	634	54.74	64.87	55.80	44.1	64.8	47.0
1946	12,874	1,095	13,969	7.84	6.57	798	92	890	61.99	84.02	63.71	41.6	60.1	40.9
1947	14,760	1,070	15,830	6.76	5.29	859	87	946	58.20	81.31	59.76	40.4	58.0	41.8
1948	12,886	908	13,794	6.58	5.41	524	57	581	40.66	62.77	42.12	33.3	45.3	34.8
1949	12,243	886	13,129	6.75	5.34	461	41	502	37.65	46.28	38.24	31.7	44.8	32.7
1950	11,523	913	12,436	7.34	5.06	433	38	471	37.58	41.62	37.87	29.1	44.8	29.8
1951	11,616	822	12,438	6.58	4.84	407	32	439	35.03	38.93	35.29	29.2	38.5	29.6
1952	11,549	818	12,367	6.61	4.60	398	26	424	34.46	31.78	34.28	27.2	34.9	27.6
1953	11,450	768	12,218	6.29	4.75	352	21	373	30.74	27.34	30.53	26.5	33.0	26.8
1954	10,967	876	11,843	7.40	4.60	322	27	349	30.82	29.47	25.1	25.1	32.1	25.4
1955	10,879	825	11,704	7.05	4.66	312	20	332	28.68	24.24	28.37	24.5	31.7	24.9
1956	11,052	915	11,967	7.65	4.60	327	31	358	29.59	33.88	29.92	24.5	31.7	23.8

* Not available

Births in wards distinguishing legitimate and illegitimate births;
also the proportion of mortality among infants of both classes under one year of age
(figures compiled in the Health Department)

WARDS	LIVE BIRTHS				DEATHS UNDER 1 YEAR OF AGE				
	Total	Legitimate	Illegitimate	% Illegitimate to total live births	Total	Legitimate	Illegitimate	Rate per	Rate per
								1000 live births	1000 live illegitimate
CITY OF MANCHESTER	11967	11052	915	7.65	358	327	31	29.92	33.88
Alexandra Park	262	231	31	11.83	6	6	—	22.90	25.97
All Saints..	551	463	88	15.97	15	14	1	27.22	30.24
Ardwick ..	442	400	42	9.50	13	10	3	29.41	25.00
Baguley ..	376	365	11	2.93	2	2	—	5.32	5.48
Barlow Moor	158	147	11	6.96	4	3	1	25.32	20.41
Benchill ..	360	334	26	7.22	10	9	1	27.78	26.95
Beswick ..	352	337	15	4.26	14	13	1	39.77	38.58
Blackley ..	324	305	19	5.86	9	8	1	27.78	26.23
Bradford ..	373	360	13	3.49	10	10	—	26.81	27.78
Burnage ..	214	205	9	4.21	3	3	—	14.02	14.63
Cheetham ..	236	215	21	8.90	6	6	—	25.42	27.91
Chorlton-cum-Hardy	162	153	9	5.56	10	10	—	61.73	65.36
Collegiate Church	260	229	31	11.92	9	9	—	34.62	39.30
Crumpsall ..	297	280	17	5.72	12	10	2	40.40	35.71
Didsbury ..	232	224	8	3.45	6	6	—	25.86	26.79
Gorton North	345	328	17	4.93	14	14	—	40.58	42.68
Gorton South	197	190	7	3.55	3	3	—	15.23	15.79
Harpurhey ..	326	319	7	2.15	7	7	—	21.47	21.94
Hugh Oldham	445	425	20	4.49	12	11	1	26.97	25.88
Levenshulme	223	206	17	7.62	6	6	—	26.91	29.13
Lightbowne	245	233	12	4.90	7	6	1	28.57	25.75
Longsight ..	271	258	13	4.80	2	2	—	7.38	7.75
Miles Platting	280	271	9	3.21	7	6	1	25.00	22.14
Moss Side East	502	403	99	19.72	15	11	4	29.88	27.30
Moss Side West	393	323	70	17.81	14	13	1	35.62	40.25
Moston ..	291	286	5	1.72	13	13	—	44.67	45.45
New Cross	292	267	25	8.56	10	9	1	34.25	33.71
Newton Heath	249	234	15	6.02	6	6	—	24.10	25.64
Northenden	352	324	28	7.95	9	6	3	25.57	18.52
Old Moat ..	198	189	9	4.55	5	4	1	25.25	21.16
Openshaw ..	337	320	17	5.04	15	13	2	44.51	40.63
Rusholme ..	246	237	9	3.66	5	4	1	20.33	16.88
St. George's	433	395	38	8.78	20	19	1	46.19	48.10
St. Luke's	489	414	75	15.34	7	14	3	34.76	33.82
St. Mark's	328	307	21	6.40	14	14	—	42.68	45.60
St. Peter's	140	130	10	12.75	5	5	—	33.56	38.46

Abstract of Registrar General's Heal

YEAR	POPULATION	DEATH RATE			BIRTH RATE			INFANT DEATH RATE			ALL PUERPERAL CAUSES			PUERPERAL AND POST ABORTIVE SEPSIS			OTHER PUERPERAL CAUSES			ALL FORMS OF TUBERCULOSIS			PULMONARY TUBERCULOSIS			OTHER FORMS OF TUBERCULOSIS			TYPHOID AND PARATYPHOID FEVERS			SCARLET FEVER			DIPHTHERIA			No
		Number of deaths	Per 1000 pop'n	England and Wales	Number of Births	Per 1000 pop'n	England and Wales	Number of deaths	Per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	
1901	543872	11801	21.70	16.9	15691	28.85	28.5	3114	198	151	61	3.89	4.73	34	2.17	2.24	27	1.72	2.49	—	1571	2.89	1339	1144	2.10	—	427	0.79	359	75	0.140	2692	127	0.230	457	133	0.240	—
1911	716163	12281	17.15	14.6	18595	25.96	24.4	2908	156	130	72	3.87	3.87	28	1.50	1.43	44	2.37	2.44	—	1491	2.08	1837	1143	1.60	—	348	0.49	256	50	0.070	1939	44	0.060	472	89	0.120	—
1921	744000	10111	13.59	12.1	17549	23.59	22.4	1713	98	82	64	3.65	3.91	34	1.94	1.38	30	1.71	2.53	2174	1230	1.65	1644	981	1.32	530	249	0.33	90	12	0.016	5419	59	0.079	1045	90	0.121	11
1931	772090	10645	13.79	12.3	12337	15.98	15.8	1049	85	66	40	†3.09	†3.94	18	†1.39	†1.59	22	†1.70	†2.35	1710	994	1.29	1229	861	1.12	481	133	0.17	27	4	0.005	2973	11	0.014	735	60	0.078	77
1932	763000	10076	13.21	12.0	11825	15.50	15.3	1015	86	65	47	3.79	4.04	20	1.61	1.55	27	2.18	2.49	1449	885	1.16	1061	766	1.00	388	119	0.16	47	3	0.004	2319	17	0.022	1069	81	0.106	122
1933	758150	10345	13.65	12.3	11156	14.71	14.4	834	75	64	52	4.43	4.32	20	1.70	1.75	32	2.73	2.57	1357	891	1.18	1053	791	1.04	304	100	0.13	15	2	0.003	1804	14	0.018	1019	87	0.115	63
1934	754600	9530	12.63	11.8	11555	15.31	14.8	798	69	59	48	3.97	4.42	16	1.32	1.95	32	2.65	2.47	1329	881	1.17	1026	761	1.01	303	120	0.16	16	2	0.003	2151	14	0.019	1276	83	0.110	113
1935	748100	10120	13.53	11.7	11379	15.21	14.7	809	71	57	44	3.69	3.93	23	1.93	1.61	21	1.76	2.32	1251	808	1.08	957	714	0.95	294	94	0.13	25	4	0.005	2849	13	0.017	1302	60	0.080	99
1936	744000	10207	13.72	12.1	11231	15.10	14.8	863	77	59	52	4.42	3.65	16	1.36	1.34	36	3.06	2.31	1226	776	1.04	937	671	0.90	289	105	0.14	19	2	0.003	2463	6	0.008	1649	91	0.122	8
1937	736500	10216	13.87	12.4	10786	14.64	14.9	823	76	58	46	4.09	3.13	13	1.16	0.94	33	2.93	2.19	1359	789	1.07	1001	674	0.92	358	115	0.16	13	1	0.001	2656	7	0.009	1883	89	0.121	6
1938	732900	9243	12.61	11.6	11025	15.04	15.1	761	69	53	46	3.98	2.97	17	1.47	0.86	29	2.51	2.11	1189	726	0.99	907	627	0.86	282	99	0.14	7	—	—	2487	8	0.011	1591	55	0.075	99
1939	B 727600 D 702500	9405	13.39	12.1	10378	14.26	15.0	634	61	50	31	2.85	2.82	8	0.73	0.74	23	2.12	2.08	1114	701	1.00	849	601	0.86	265	100	0.14	30	1	0.001	1332	1	0.001	1031	36	0.051	5
1940	622300	11191	17.98	14.3	10388	16.69	14.6	729	70	55	24	2.21	2.16*	9	0.83	0.52*	15	1.38	1.64*	1182	769	1.24	943	678	1.09	239	91	0.15	72	1	0.002	768	1	0.002	917	47	0.076	148
1941	601840	10016	16.64	12.9	9849	16.36	14.2	832	84	59	26	2.53	2.23*	10	0.97	0.48*	16	1.56	1.75*	1226	794	1.32	968	679	1.13	258	115	0.19	69	—	—	885	2	0.003	1009	46	0.076	3
1942	601900	8861	14.72	11.6	10276	17.07	15.8	663	65	49	25	2.33	2.01*	7	0.65	0.42*	18	1.68	1.59*	1128	672	1.12	894	592	0.99	234	80	0.13	11	2	0.003	1869	1	0.002	814	27	0.045	104
1943	599300	9290	15.50	12.1	11185	18.66	16.5	681	61	49	27	2.33	2.29	12	1.04	0.73	15	1.29	1.56	1172	639	1.07	900	546	0.91	272	93	0.16	20	1	0.002	1992	1	0.002	791	30	0.050	44
1944	614760	8731	14.20	11.6	12204	19.85	17.6	654	54	46	23	1.83	1.93	8	0.64	0.59	15	1.19	1.34	1051	559	0.91	840	491	0.80	211	68	0.11	4	—	—	1539	—	—	266	6	0.010	67
1945	623480	8985	14.41	11.4	11362	18.22	16.1	634	56	46	12	1.02	1.79	3	0.25	0.49	9	0.77	1.30	1113	577	0.93	913	496	0.80	200	81	0.13	9	1	0.001	1140	—	—	302	14	0.022	55
1946	668660	9038	13.52	11.5	13969	20.89	19.1	890	64	43	23	1.60	1.43	5	0.35	0.31	18	1.25	1.12	973	527	0.79	805	460	0.69	168	67	0.10	18	1	0.001	775	—	—	259	11	0.016	38
1947	685560	9453	13.79	12.0	15830	23.09	20.5	946	60	41	25	1.54	1.17	9	0.55	0.26	16	0.99	0.91	920	514	0.75	786	450	0.66	134	64	0.09	4	—	—	939	—	—	80	3	0.001	90
1948	693000	8501	12.27	10.8	13794	19.90	17.9	581	42	34	11	0.78	1.02	1	0.07	0.24	10	0.71	0.78	1004	526	0.76	863	477	0.69	141	49	0.07	4	1	0.001	1222	—	—	43	1	0.001	100
1949	699600	9036	12.91	11.7	13129	18.77	16.7	502	38	32	16	1.19	0.98	6	0.45	0.22	10	0.74	0.76	1053	456	0.65	899	418	0.60	154	38	0.05	15	—	—	1594	—	—	22	—	—	64
1950	704500	8999	12.77	11.6	12436	17.65	15.8	471	38	30	10	0.78	0.86	1	0.08	0.12	9	0.70	0.74	869	458	0.65	737	411	0.58	132	47	0.07	2	1	0.001	1447	—	—	22	3	0.004	9
1951	699900	9676	13.82	12.5	12438	17.77	15.5	439	35	30	19	1.49	0.79	5	0.39	0.19	14	1.10	0.60	816	357	0.51	711	318	0.45	105	39	0.06	15	—	—	970	—	—	10	—	—	89
1952	705400	8576	12.16	11.3	12367	17.53	15.3	424	34	28	9	0.71	0.72	2	0.16	0.16	7	0.55	0.56	813	293	0.41	717	269	0.38	96	24	0.03	19	—	—	1121	—	—	7	1	0.001	100
1953	701800	8638	12.31	11.4	12218	17.41	15.5	373	31	27	10	0.80	0.76	—	—	0.16	10	0.80	0.60	835	216	0.31	742	198	0.28	93	18	0.03	2	—	—	968	—	—	7	1	0.001	67
1954	699000	8525	12.20	11.3	11843	16.94	15.2	349	29	25	6	0.49	0.69	—	—	0.14	6	0.49	0.55	779	209	0.30	672	188	0.27	107	21	0.03	1	—	—	767	1	0.001	—	—	—	98
1955	692200	8777	12.68	11.7	11704	16.91	15.0	332	28	25	9	0.75	0.64	4	0.33	0.17	5	0.42	0.47	739	144	0.21	662	130	0.19	77	14	0.02	2	—	—	795	1	0.001	1	—	—	65
1956	686200	8475	12.35	11.7	11967	17.44	15.7	358	30	24	3	0.24	0.56	1	0.08	x	2	0.16	x	648	114	0.17	592	101	0.15	56	13	0.02	16	—	—	527	—	—	—	—	—	2

B Population for calculating birth-rates.
D Population for calculating death-rates.

* Excluding abortion.
† From 1931 rates for maternal mortality are based on live and still births.
x Figures for 1956 not available.

From 1944 the number of notifications of infectious diseases refers to true cases only.

Health Reports, 1901 to 1956

	MEASLES			WHOOPING COUGH			ACUTE POLIOMYELITIS AND POLIO-ENCEPHALITIS			MENINGOCOCCAL INFECTIONS			PNEUMONIA— ALL FORMS			INFLUENZA		BRONCHITIS		DIARRHŒA (under 2 years)		MALIGNANT NEOPLASMS		VASCULAR LESIONS OF CENTRAL NERVOUS SYSTEM		HEART DISEASE		OTHER DISEASES OF CIRCULATORY SYSTEM		NEPHRITIS AND NEPHROSIS		CONGENITAL MALFORMATIONS AND DEBILITY, ETC., INCLUDING PREMATURE BIRTH		VIOLENCE (Apart from suicide)		SUICIDE		YEAR
Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1,000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1,000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	
0.240	—	292	0.51	—	224	0.41	—	—	—	—	—	—	—	1212	2.23	99	0.18	1072	1.97	921	1.69	425	0.78	427	0.72	957	1.76	46	0.08	228	0.42	860	1.58	381	0.70	45	0.08	1901
0.120	—	337	0.47	—	141	0.20	—	—	—	—	—	—	—	1278	1.78	87	0.12	1074	1.30	1100	1.54	772	1.08	440	0.61	965	1.34	150	0.21	345	0.48	798	1.11	399	0.56	66	0.09	1911
0.121	1135	4	0.01	4415	170	0.23	8	1	0.001	3	8	0.01	1796	995	1.34	204	0.27	1038	1.40	375	0.50	953	1.28	433	0.58	1002	1.35	236	0.32	258	0.35	581	0.78	282	0.38	63	0.08	1921
0.078	7771	63	0.08	3150	90	0.12	6	—	—	45	30	0.04	2485	981	1.27	337	0.44	826	1.07	172	0.22	1259	1.63	453	0.59	1738	2.25	517	0.67	300	0.39	442	0.57	302	0.39	95	0.12	1931
0.106	12238	129	0.17	2280	84	0.11	7	1	0.001	37	21	0.03	2368	882	1.16	184	0.24	556	0.73	125	0.16	1287	1.69	465	0.61	1761	2.31	496	0.65	292	0.38	439	0.58	328	0.43	116	0.15	1932
0.115	6350	48	0.06	2230	49	0.06	12	5	0.007	53	22	0.03	2527	824	1.09	532	0.70	579	0.76	102	0.13	1194	1.57	419	0.55	2090	2.76	502	0.66	269	0.35	409	0.54	335	0.44	100	0.13	1933
0.110	11383	96	0.13	1565	37	0.05	17	1	0.001	45	22	0.03	1674	687	0.91	92	0.12	422	0.56	113	0.15	1273	1.69	488	0.65	1905	2.52	471	0.62	282	0.37	417	0.55	303	0.40	96	0.13	1934
0.080	9907	99	0.13	1632	50	0.07	8	1	0.001	59	28	0.04	2480	765	1.02	222	0.30	485	0.65	74	0.10	1338	1.79	530	0.71	1979	2.65	373	0.50	258	0.34	444	0.59	286	0.38	99	0.13	1935
0.122	8807	114	0.15	1457	52	0.07	32	1	0.001	72	38	0.05	2213	781	1.05	125	0.17	534	0.72	57	0.08	1256	1.69	472	0.63	2224	2.99	466	0.63	270	0.36	444	0.60	318	0.43	93	0.13	1936
0.121	6550	44	0.06	1403	54	0.07	2	3	0.004	61	21	0.03	2427	742	1.01	308	0.42	475	0.64	64	0.09	1284	1.74	416	0.56	2315	3.14	440	0.60	261	0.35	419	0.57	307	0.42	70	0.10	1937
0.075	9949	60	0.08	1075	13	0.02	13	—	—	64	19	0.03	1646	589	0.80	84	0.11	347	0.47	75	0.10	1316	1.80	511	0.70	2083	2.84	436	0.59	230	0.31	386	0.53	295	0.40	88	0.12	1938
0.051	574	—	—	1406	30	0.04	26	2	0.003	49	7	0.01	1324	411	0.59	160	0.23	427	0.61	62	0.09	1265	1.80	492	0.70	2311	3.29	470	0.67	258	0.37	357	0.51	376	0.54	91	0.13	1939
0.076	14844	28	0.04	670	7	0.01	8	2	0.003	223	51	0.08	1785	551	0.89	198	0.32	1733	2.78	75	0.12	1242	2.00	825	1.33	2023	3.25	286	0.46	274	0.44	350	0.56	692	1.11	71	0.11	1940
0.076	3869	20	0.03	4715	65	0.11	33	3	0.005	286	38	0.06	1809	548	0.91	105	0.17	1034	1.72	113	0.19	1259	2.09	780	1.30	1883	3.13	214	0.36	235	0.39	372	0.62	660	1.10	57	0.09	1941
0.045	10468	17	0.03	1103	16	0.03	8	1	0.002	200	20	0.03	1402	364	0.60	51	0.09	823	1.37	93	0.15	1256	2.09	790	1.31	1938	3.22	238	0.40	233	0.39	379	0.63	297	0.49	50	0.08	1942
0.050	4419	12	0.02	3277	42	0.07	14	4	0.007	107	14	0.02	1374	468	0.78	231	0.38	971	1.62	88	0.15	1280	2.14	741	1.24	1833	3.06	289	0.48	222	0.37	356	0.59	292	0.49	60	0.10	1943
0.010	6736	9	0.01	2003	26	0.04	—	1	0.002	28	8	0.01	979	357	0.58	50	0.08	791	1.29	73	0.12	1286	2.09	827	1.35	1950	3.17	280	0.46	226	0.37	367	0.60	280	0.46	65	0.11	1944
0.022	5596	8	0.01	1835	25	0.04	6	—	—	44	11	0.02	857	365	0.59	44	0.07	984	1.58	85	0.14	1297	2.08	874	1.40	1824	2.93	307	0.49	214	0.34	332	0.53	233	0.37	74	0.12	1945
0.016	3800	3	0.00	2265	32	0.05	6	1	0.001	33	10	0.01	1040	399	0.60	105	0.16	893	1.34	169	0.25	1285	1.92	840	1.26	1882	2.81	377	0.56	211	0.32	454	0.68	237	0.35	54	0.08	1946
0.001	9008	20	0.03	2308	18	0.03	123	11	0.016	23	8	0.01	770	452	0.66	36	0.05	880	1.28	229	0.33	1407	2.05	957	1.39	2146	3.13	402	0.59	224	0.33	437	0.64	227	0.33	67	0.10	1947
0.001	10650	17	0.02	2612	19	0.03	25	4	0.006	20	8	0.01	825	353	0.51	16	0.02	801	1.16	58	0.08	1386	2.00	872	1.26	1917	2.77	406	0.59	196	0.28	312	0.45	206	0.29	77	0.11	1948
—	6485	7	0.01	2749	29	0.04	35	8	0.012	29	8	0.01	783	396	0.57	108	0.15	943	1.35	60	0.09	1398	2.00	1010	1.60	2206	3.15	430	0.61	167	0.24	272	0.39	166	0.24	88	0.13	1949
0.004	9798	9	0.01	4187	19	0.03	98	5	0.007	23	5	0.01	696	331	0.47	61	0.09	837	1.19	38	0.05	1405	1.99	1001	1.42	2585	3.68	328	0.47	91	0.13	309	0.44	208	0.30	67	0.10	1950
—	8963	1	0.00	2255	3	0.00	23	2	0.003	27	5	0.01	709	412	0.59	257	0.37	1012	1.45	30	0.04	1507	2.15	1142	1.63	2766	3.95	339	0.48	81	0.12	287	0.41	218	0.32	81	0.12	1951
0.001	10035	6	0.01	2635	8	0.01	35	1	0.001	23	2	0.00	521	336	0.48	24	0.03	741	1.05	22	0.03	1536	2.18	1108	1.56	2491	3.54	343	0.49	99	0.14	300	0.42	215	0.30	75	0.11	1952
0.001	6798	2	0.00	2112	4	0.01	11	—	—	33	6	0.01	576	338	0.48	102	0.15	791	1.13	9	0.01	1519	2.16	1151	1.64	2550	3.63	322	0.46	65	0.09	284	0.40	232	0.33	100	0.14	1953
—	9844	3	0.00	1642	4	0.01	13	2	0.003	29	2	0.00	384	317	0.45	32	0.05	761	1.09	12	0.02	1568	2.24	1143	1.64	2517	3.60	332	0.47	53	0.08	294	0.42	186	0.27	86	0.12	1954
—	6514	2	0.00	1106	2	0.00	29	1	0.001	22	3	0.00	366	413	0.60	34	0.05	790	1.14	7	0.01	1580	2.28	1224	1.77	2673	3.86	355	0.51	72	0.10	259	0.37	230	0.33	84	0.12	1955
—	2223	—	—	1751	—	—	321	8	0.012	28	9	0.01	334	346	0.50	35	0.05	776	1.13	6	0.01	1531	2.23	1203	1.75	2536	3.70	384	0.56	56	0.08	277	0.40	200	0.29	89	0.13	1956

Still-births, peri-natal deaths, neo-natal deaths, deaths at four weeks to one year of age, and infant death rate, 1937-1956

Year	Total live and still-births	STILL-BIRTHS		PERI-NATAL DEATHS		NEO-NATAL DEATHS		DEATHS, 4 WEEKS—1 YEAR		DEATHS UNDER 1 YEAR AND STILL-BIRTHS		Infant death rate per 1,000 live births
		Number of still-births	Rate per 1,000 live and still-births	Number of peri-natal deaths (still-births and deaths under 1 week)	Rate per 1,000 total live and still-births	Number of neo-natal deaths, 0-4 weeks	Rate per 1,000 total live births	Number of deaths, 4 weeks—1 year	Rate per 1,000 total live births	Number of deaths under 1 year and still-births	Rate per 1,000 total live and still-births	
1937	..	468	41.59	738	65.58	381	35.32	442	40.98	1,291	114.71	76.30
1938	..	507	43.96	751	65.12	351	31.84	410	37.19	1,268	109.95	69.03
1939	..	492	45.26	719	66.15	321	30.93	313	30.16	1,126	103.59	61.09
1940	..	478	43.99	687	63.22	295	28.40	434	41.78	1,207	111.08	70.18
1941	..	400	39.03	611	59.62	292	29.65	540	54.82	1,232	120.21	84.47
1942	..	443	41.33	636	59.33	304	29.58	359	34.94	1,106	103.18	64.52
1943	..	406	35.02	612	52.80	306	27.36	375	33.52	1,087	93.77	60.88
1944	..	367	29.19	602	47.89	315	25.81	339	27.78	1,021	81.22	53.59
1945	..	372	31.70	592	50.45	311	27.37	323	28.43	1,006	85.73	55.80
1946	..	445	30.87	720	49.95	474	33.93	416	29.78	1,335	92.62	63.71
1947	..	427	26.27	694	42.69	466	29.44	480	30.32	1,380	84.89	59.76
1948	..	376	26.53	588	41.50	274	19.85	307	22.26	957	67.54	42.12
1949	..	331	24.59	528	39.23	242	18.43	260	19.80	833	61.88	38.24
1950	..	333	26.08	551	43.15	263	21.15	208	16.72	804	62.96	37.87
1951	..	319	25.01	521	40.84	251	20.18	188	15.11	758	59.42	35.29
1952	..	349	27.45	575	45.22	269	21.75	155	12.53	773	60.78	34.28
1953	..	355	28.24	583	46.37	255	20.87	118	9.66	728	57.90	30.53
1954	..	389	31.80	587	47.99	237	20.01	112	9.46	738	60.33	29.47
1955	..	318	26.45	496	41.26	215	18.37	117	10.00	650	54.07	28.37
1956	..	324	26.36	538	43.77	241	20.14	117	9.78	682	55.49	29.92

INFECTIOUS DISEASES AND EPIDEMIOLOGY

Immunization against specific diseases

Smallpox vaccination

When the National Health Service Act became operative in July, 1948 vaccination ceased to be compulsory and the decision for or against the vaccination of young children was entirely a matter for the parents. It will be seen that, generally speaking, there has been a tendency for the acceptance rate to increase during the last four years and it is higher than it was during the years 1948 to 1952. Possibly, some part of this improvement is due to the fact that, during the past three years, vaccinations have been carried out at child welfare clinics. It is also gratifying to note that, in 1956, there was an appreciable rise in the most important age group, that of infants under one year of age. This is a more satisfactory state of affairs, and one which indicates that continuous education about the need for early protection is having some effect on apathetic and indifferent parents. No instance was reported during the year of a vaccination in which there occurred, or was alleged to have occurred, general vaccinia, post-vaccinal encephalomyelitis or death from any other complications of vaccination.

The following table shows the number of infants who were vaccinated during the year, either at child welfare clinics or by their own doctors; it will be observed that twice as many were carried out at clinics than by general practitioners.

General practitioners			Child welfare clinics		
Primary	..	1,835	Primary	..	3,680
Insusceptible	..	99	Insusceptible	..	389
Total	..	<u>1,934</u>	Total	..	<u>4,069</u>

The numbers of children successfully vaccinated in each of the past 10 years, with percentages, are as follows:—

Year	Numbers of persons vaccinated					Numbers of live births	Percentages vaccinated under 1 year to live births
	under 1 year	1—4 years	5—14 years	15 years and over	Totals		
1947 ..	9,856	302			10,158	15,830	62·26
1948 ..	4,916	173			5,089	13,794	35·64
1949 ..	2,957	2,031	70	383	5,441	13,129	22·52
1950 ..	5,409	2,668	846	685	9,608	12,436	43·49
1951 ..	4,803	587	311	1,937	7,638	12,438	38·61
1952 ..	4,419	599	382	2,106	7,506	12,367	35·73
1953 ..	5,827	1,227	1,328	3,776	12,158	12,218	47·69
1954 ..	5,627	704	120	427	6,878	11,843	47·51
1955 ..	5,401	608	139	380	6,528	11,704	46·15
1956 ..	5,755	436	106	311	6,608	11,967	48·10

NOTE.—Percentages vaccinated under 1 year to live births for the years 1947 to 1948 were expressed in previous reports as percentages of the uncorrected live births.

Cases of notifiable infectious diseases other than tuberculosis classified in wards of the City

Estimated population		Dysentery	Typhoid fever	Paratyphoid fevers	Other food poisoning	Scarlet fever	Diphtheria	Erysipelas	Whooping cough	Measles	German measles	Meningococcal infections	Acute poliomyelitis		Encephalitis		Pneumonia				Smallpox	Malaria (contracted in England & Wales)	Ophthalmia neonatorum	Pemphigus neonatorum	Puerperal pyrexia	Total cases	Rates per 1,000 population in wards
													Paralytic	Non-paralytic	Acute infective	Post-infectious	Lobar	Broncho	Influenzal	Other							
686200	Total for the City	563	1	15	86	527	—	39	1751	2223	1281	28	93	228	1	—	193	68	17	56	—	—	62	5	394	7631	11·12
	WARDS																										
21086	ALEXANDRA PARK	6	—	—	1	10	—	1	32	41	16	1	1	9	—	—	2	—	—	1	—	—	4	1	13	139	6·59
17534	ALL SAINTS	15	—	—	9	15	—	2	43	44	36	4	2	12	—	—	12	7	—	1	—	—	5	—	22	229	13·06
16899	ARDWICK	11	—	—	3	14	—	1	50	35	11	1	—	5	—	—	1	1	—	2	—	—	4	—	14	153	9·05
18515	BAGULEY	21	—	—	5	40	—	2	80	276	33	2	9	12	—	—	2	—	—	1	—	—	1	—	6	490	26·47
15401	BARLOW MOOR	—	—	—	—	2	—	—	29	19	15	—	3	3	—	—	3	1	—	—	—	—	2	—	5	82	5·32
18248	BENCHILL	10	—	—	1	14	—	—	127	179	84	—	1	6	—	—	11	—	—	5	—	—	—	—	5	443	24·28
18707	BESWICK	2	—	—	1	8	—	—	53	26	29	1	2	8	—	—	10	3	—	—	—	—	—	—	2	145	7·75
21800	BLACKLEY	10	—	—	3	12	—	1	49	44	41	—	2	6	—	—	8	1	1	3	—	—	—	—	2	183	8·40
22051	BRADFORD	35	—	—	1	13	—	—	74	47	27	—	3	7	—	—	10	4	1	—	—	—	1	—	10	233	10·57
21603	BURNAGE	6	—	—	—	17	—	—	25	15	20	—	1	2	—	—	9	3	—	3	—	—	—	—	2	103	4·77
13628	CHEETHAM	7	—	—	1	9	—	1	35	23	9	1	2	3	—	—	1	3	1	—	—	—	1	—	1	98	7·19
19706	CHORLTON-CUM-HARDY	1	—	6	3	7	—	2	43	60	13	—	2	4	—	—	4	—	—	—	—	—	7	—	3	155	7·87
12851	COLLEGIATE CHURCH	10	—	—	4	6	—	—	42	21	20	2	1	1	—	—	4	2	—	7	—	—	2	—	4	126	9·80
23215	CRUMPSALL	16	—	—	1	14	—	2	46	35	33	1	6	4	—	—	4	—	—	1	—	—	—	—	7	170	7·32
17506	DIDSBURY	2	—	—	—	8	—	8	39	103	58	—	2	1	—	—	—	—	—	—	—	—	—	—	6	227	12·97
22444	GORTON NORTH	76	—	—	3	18	—	1	38	44	21	1	1	4	—	—	3	7	2	1	—	—	—	—	7	227	10·11
16948	GORTON SOUTH	15	—	—	2	13	—	—	23	15	33	1	1	2	—	—	1	—	—	1	—	—	—	—	7	114	6·73
17532	HARPURHEY	7	—	—	—	15	—	—	9	25	29	2	3	3	—	—	2	—	—	3	—	—	1	1	4	104	5·93
17383	HUGH OLDHAM	3	—	—	1	12	—	—	36	53	13	1	2	2	—	—	9	—	—	1	—	—	2	—	5	140	8·05
18709	LEVENSHULME	8	—	—	—	10	—	2	5	9	13	—	2	5	—	—	1	—	1	1	—	—	2	—	6	65	3·47
19444	LIGHTBOWNE	2	—	—	4	12	—	—	9	34	73	—	2	3	—	—	—	—	—	—	—	—	—	—	1	140	7·20
14918	LONGSIGHT	3	—	—	1	11	—	2	19	50	11	—	2	14	—	—	3	2	2	1	—	—	1	—	10	132	8·85
13835	MILES PLATTING	3	—	—	2	24	—	—	53	10	14	2	—	1	1	—	8	1	1	—	—	—	4	—	2	126	9·11
18183	MOSS SIDE EAST	6	—	—	2	16	—	—	90	66	28	1	5	9	—	—	4	2	—	1	—	—	2	—	22	254	13·97
17345	MOSS SIDE WEST	5	—	—	—	14	—	—	47	38	9	1	2	21	—	—	1	—	—	1	—	—	3	—	16	158	9·11
20358	MOSTON	8	—	—	2	12	—	1	35	191	192	—	4	3	—	—	11	2	—	3	—	—	—	—	2	466	22·89
13053	NEW CROSS	36	—	—	6	16	—	1	95	8	21	4	2	7	—	—	15	1	3	1	—	—	—	—	4	220	16·85
18399	NEWTON HEATH	2	—	—	1	21	—	1	45	17	79	—	1	1	—	—	20	5	—	—	—	—	2	—	5	200	10·87
20974	NORTHENDEN	119	—	4	5	33	—	5	83	146	78	—	10	6	—	—	—	2	1	2	—	—	2	3	4	503	23·98
16827	OLD MOAT	7	—	—	—	8	—	1	45	57	27	—	5	6	—	—	—	4	1	2	—	—	1	—	9	173	10·28
22005	OPENSHAW	46	1	—	1	22	—	1	46	91	61	1	2	5	—	—	10	1	—	2	—	—	1	—	8	299	13·59
16663	RUSHOLME	7	—	5	5	18	—	—	28	40	20	—	2	3	—	—	3	3	1	1	—	—	1	—	20	157	9·42
17809	ST. GEORGE'S	8	—	—	2	8	—	1	63	64	13	—	—	18	—	—	6	1	2	2	—	—	—	—	23	211	11·85
17364	ST. LUKE'S	23	—	—	5	10	—	1	18	17	17	—	3	10	—	—	6	6	—	3	—	—	9	—	23	151	8·70
20486	ST. MARK'S	18	—	—	1	9	—	2	33	15	22	1	1	2	—	—	—	—	—	1	—	—	1	—	8	114	5·56
10628	ST. PETER'S	5	—	—	8	8	—	—	28	18	2	—	—	1	—	—	2	6	—	1	—	—	2	—	8	89	8·37
15314	WITHINGTON	3	—	—	—	9	—	—	23	19	27	—	1	5	—	—	4	—	—	3	—	—	1	—	3	98	6·40
20829	WOODHOUSE PARK	1	—	—	2	19	—	—	113	228	33	—	5	14	—	—	3	—	—	1	—	—	—	—	6	425	20·40
	HOSPITALS AND INSTITUTIONS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89	89	



Primary vaccinations—year ended 31st December, 1956

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Grand totals all age groups	
	0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+			
	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S		
January	200	193	10	9	6	6	9	9	36	36	25	25	—	—	—	—	—	—	—	—	388	367	22	22	15	15	—	—	—	—	613	585	32	31	21	21	9	9	36	36	711	682
February	152	150	12	12	8	8	6	6	39	39	21	21	—	—	—	—	—	—	2	2	283	261	7	7	22	22	—	—	—	—	456	432	19	19	30	30	6	6	41	41	552	528
March	145	138	8	7	16	16	14	13	24	24	20	20	2	2	—	—	—	—	4	4	363	337	10	10	10	10	—	—	—	—	528	495	20	19	26	26	14	13	28	28	616	581
April	185	183	6	6	17	17	14	14	41	41	12	12	—	—	—	—	—	—	—	—	401	372	6	5	1	1	—	—	—	—	598	567	12	11	18	18	14	14	41	41	683	651
May	153	150	4	4	15	15	14	14	21	21	19	19	—	—	—	—	—	—	1	1	264	258	1	1	—	—	1	1	—	—	436	427	5	5	15	15	15	15	22	22	493	484
June	169	162	10	10	2	2	7	7	21	21	19	19	—	—	—	—	—	—	—	—	445	416	6	6	2	2	—	—	1	1	633	597	16	16	4	4	7	7	22	22	682	646
July	169	162	6	6	10	8	12	11	30	26	15	15	—	—	—	—	—	—	—	—	336	268	8	6	9	9	—	—	1	1	520	445	14	12	19	17	12	11	31	27	596	512
August	106	96	7	7	3	3	3	3	15	13	14	14	1	1	—	—	—	—	—	—	368	337	10	10	10	10	—	—	—	—	488	447	18	18	13	13	3	3	15	13	537	494
September	120	115	7	7	4	4	7	7	14	14	42	41	2	2	1	1	—	—	—	—	319	273	18	14	11	8	—	—	—	—	481	429	27	23	16	13	7	7	14	14	545	486
October	242	221	12	12	13	13	6	6	23	19	26	26	2	2	1	1	—	—	—	—	420	366	16	13	16	16	—	—	—	—	688	613	30	27	30	30	6	6	23	19	777	695
November.. .. .	163	152	17	17	9	8	7	7	24	22	9	9	3	3	2	2	—	—	—	—	308	273	8	8	9	8	—	—	—	—	480	434	28	28	20	18	7	7	24	22	559	509
December	130	113	10	10	2	2	9	8	27	26	19	19	1	1	—	—	—	—	—	—	174	152	6	6	3	3	—	—	—	—	323	284	17	17	5	5	9	8	27	26	381	340
Total ..	1,934	1,835	109	107	105	102	108	105	315	302	241	240	11	11	4	4	—	—	7	7	4069	3680	118	108	108	104	1	1	2	2	6,244	5,755	238	226	217	210	109	106	324	311	7,132	6,608

Re-vaccinations—year ended 31st December, 1956

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Grand totals all age groups	
	0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+		0-1		1-2		2-5		5-15		15+			
	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S				
January	—	—	1	1	2	2	11	8	62	56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1	2	2	11	8	63	57	77	68	
February	—	—	—	—	4	3	7	4	69	62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	—	—	—	4	3	7	4	75	68	86	75		
March	—	—	—	—	2	2	9	9	90	84	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	3	3	—	—	—	—	2	2	9	9	95	89	106	100		
April	—	—	—	—	3	3	5	4	81	76	—	—	—	—	—	—	—	—	5	5	—	—	—	—	—	—	12	12	—	—	—	—	3	3	5	4	98	93	106	100		
May	—	—	—	—	2	2	6	6	73	71	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	3	3	—	—	—	—	2	2	6	6	77	75	85	83		
June	—	—	—	—	2	2	11	11	91	86	—	—	—	—	—	—	—	—	3	2	—	—	—	—	—	—	2	2	—	—	—	—	2	2	11	11	96	90	109	103		
July	—	—	—	—	5	5	9	9	65	56	—	—	1	1	1	1	—	—	2	2	—	—	—	—	—	—	2	2	—	—	1	1	6	6	9	9	69	60	85	76		
August	—	—	—	—	5	5	9	9	57	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	5	5	9	9	58	56	72	70		
September	—	—	—	—	6	6	8	8	46	41	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	6	6	8	8	47	42	61	56			
October	—	—	—	—	3	3	10	10	67	56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	3	3	10	10	68	57	81	70		
November.. .. .	—	—	—	—	—	—	2	2	40	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	—	—	2	2	43	38	45	40		
December	—	—	—	—	5	5	3	3	74	62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	5	5	3	3	75	63	83	71		
Total ..	—	—	1	1	39	38	90	83	815	740	—	—	1	1	1	1	—	—	14	13	—	—	—	—	—	—	35	35	—	—	2	2	40	39	90	83	864	788	996	912		

P=Performed.

S=Successful.



Diphtheria immunization

A memorandum received from the Ministry of Health dealt with the question as to whether other immunization and vaccination procedures should be undertaken simultaneously with poliomyelitis vaccination and suggested that it was reasonable to postpone smallpox vaccination and immunizations for a period of at least a fortnight immediately prior to and after May and June, 1956, as the first children to be vaccinated under the poliomyelitis vaccination scheme would receive injections during those months. Immunization and vaccination procedures carried out in the Health Department and School Health Service were suspended for all children in the City who were born between 1st January, 1947 and 31st December, 1954, and the following directions were issued:— (a) no first injections in connection with whooping cough or diphtheria immunization to be given after 31st March, 1956; (b) no vaccination or immunization procedures of any kind to be given after 15th April, 1956; this suspension was in force until the latter part of June, 1956. General practitioners were advised to do likewise, and they did. It is understandable, therefore, that an interruption of nearly three months in the normal service resulted in an appreciable reduction in the number of children immunized against diphtheria. Continued efforts, however, were still made during the year, through the media of health visitors, welfare centres, school clinics and teachers, to ensure that as many children as possible were fully protected by immunization. Importance is attached to the necessity of each child who has been immunized in infancy receiving a reinforcing injection at the age of 5 years or when entering school.

In the early part of 1956 the general procedure for immunization in the Department was changed. It was decided to abandon the former procedure of two injections of A.P.T. where a period of over five years had elapsed since the date of the primary course and to give a reinforcing inoculation consisting of one dose of 1 c.c. of T.A.F. only.

The following routine was, therefore, adopted:—

Diphtheria immunisation

Age	Primary immunization	Reinforcing inoculation
months to 7 years	2 doses each of 0.5 c.c. A.P.T. with 4 weeks interval between injections.	1 dose of 1 c.c. T.A.F. 5 years after primary course.
years and over	3 doses each of 1 c.c. T.A.F. with 4 weeks interval between injections.	

In cases where the interval between the first and second doses of diphtheria antigen is abnormally long, e.g. as a result of intercurrent illness, the maximum interval that should elapse between these doses in the initial period of immunization should be three months. The procedure is likely to be less efficacious if the interval is longer than this.

The Mobile Immunization Unit (Dr. Anne Doreen Lepine, M.R.C.S., M.R.C.P.—Medical Officer) continued its good work in the city and was mainly employed in those districts far removed from child welfare centres and in areas where the response by parents to the facilities available was poor. Apart from the main service the Unit renders, it has proved also an aid to the publicity campaign and is instrumental in bringing to the notice of indifferent parents the need to have their children fully protected against diphtheria. The number of children who received a full course of immunization on the Unit was 2,019 (a decrease of 1328 on 1955) or 21.3 per cent. of the total immunized in the city.

9,531 Manchester persons received a complete course of diphtheria antigen injections, 581 others received an incomplete course and 8,124 were given a reinforcing injection. In addition, 219 non-Manchester residents received a full course of primary immunization and 206 a "booster" injection. The numbers were distributed as follows:—

Number of Manchester persons immunized and number of immunizations effected

	Numbers having received complete course of antigen	Numbers having received incomplete course of antigen	Numbers having received reinforcing course of antigen
Schools and school clinics	2,359	426	7,230
Child welfare centres	3,141	90	345
Day nurseries	218	5	21
Hospitals	307	2	96
Health Office	2	—	13
Mobile Unit	2,019	40	84
General practitioners	1,456	18	320
Manchester persons immunized by outside authorities ..	29	—	15
Persons from outside authorities immunized in Manchester	219	—	206
Total Manchester persons immunized	9,531	581	8,124
Total immunizations effected in Manchester	9,721	583	8,315

7,260 children under five years of age and 2,227 children of school age (a total of 9,487 children) each completed a full course of immunization. At the close of the year, 84·17 per cent. of Manchester children had been immunized, the percentages in age groups being 58·92 in the group 0-4 years and 97·82 in the group 5-14 years.

Antigens used in immunizing Manchester pre-school and school children

Age group	Numbers having received a complete course of injections	Antigens used				
		A.P.T.	T.A.F.	P.T.A.P.	Diphtheria and pertussis combined	Diphtheria pertussis and tetanus combined
Under 1 year	3,586	2,910	9	26	277	364
1-4 years	3,674	3,436	4	46	106	82
5-14 years	2,227	1,142	1,071	6	5	3
Totals—under 15 years	9,487	7,488	1,084	78	388	449

Although Schick testing is not practised as a routine in connection with the greater part of the scheme, such tests were carried out largely among hospital patients and staff. The number of primary tests performed on persons not previously immunized was 13, of which 2 gave positive results and 11 negative. 145 posterior tests were carried out on persons previously immunized of which 16 gave positive and 129 negative results.

The following table illustrates the progress of the immunization scheme since its inception:—

**Illustrating the progress of the immunization scheme since its inception
Numbers of Manchester persons, in age groups, having had complete courses of injections**

	1928 to 1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	Total under 5 years at end of 1956
Under 1 year	6297	740	503	1497	1761	2298	1767	2383	2540	3349	4582	4678	3863	3281	3411	3108	3495	3527	3586	
1 year	8268	965	912	1882	2411	3557	2927	4379	4202	3444	4747	3994	3222	4133	3931	3848	3243	3206	2508	
2 years	6391	576	409	1295	1292	1567	342	1258	1517	574	1139	1134	837	842	1093	940	831	1161	598	
3 "	6209	476	272	1065	1140	1504	168	554	1045	280	369	439	405	462	541	461	360	496	281	33646
4 "	6407	475	238	1057	920	1710	145	342	600	202	220	189	207	420	466	398	331	430	287	
5 "	6831	464	192	1226	473	1747	182	264	333	100	132	116	170	444	603	583	511	598	416	
6 "	6963	447	222	1241	379	2165	199	233	269	77	91	74	171	483	381	467	375	922	445	Total 5-9 years
7 "	6708	382	195	1215	236	1577	206	139	215	52	68	58	171	515	310	225	287	686	250	
8 "	6669	408	179	1137	176	931	106	101	189	43	63	33	141	640	337	199	170	494	179	55901
9 "	6164	336	162	1036	112	805	98	68	143	36	54	31	159	584	363	164	111	286	185	
10 "	5784	308	137	1050	117	864	97	87	86	28	37	23	216	749	380	198	105	348	193	
11 "	4461	274	86	933	121	595	72	71	89	15	27	16	165	645	354	149	87	307	172	Total 10-14 years
12 "	3766	218	43	1038	131	465	32	67	61	22	18	7	186	702	426	160	78	207	137	
13 "	3174	259	39	502	100	436	33	50	36	11	15	5	145	747	398	166	90	159	127	47399
14 "	895	49	11	219	53	51	12	14	17	6	11	5	126	567	260	125	71	151	123	
15 years and over..	3496	102	105	309	221	298	139	210	155	112	108	47	60	155	68	75	80	81	44	Total 15 years & over
Totals 1928-56	88486	6479	3705	16702	9643	20570	6525	10220	11497	8351	11681	10849	10244	15369	13322	11266	10225	13119	9531	287784

The totals at the end of 1956 indicate only approximately the immune population since no account is taken of any deaths that may have ensued amongst the immunized children.

Whooping cough immunization

It is recognised that the personal influence of the health visitor is the greatest single factor in achieving a high level of immunization in the pre-school child and efforts are constantly being made during routine visiting to persuade parents to allow their children to receive protection against whooping cough at the centres or, if preferred, by their own doctor. Although the total number of children who completed a full course of whooping cough immunization in 1956 was 4,168, 156 more than the previous year, it is reasonable to assume that the total would have exceeded that for 1954 (4,369) if a temporary suspension of the service had not been in force during the early part of the year.

The standard procedure which has been adopted is as follows:—

Age	Primary immunization	Reinforcing inoculation
3 months and not exceeding 5 years of age	3 × 1 c.c. doses of vaccine at monthly intervals. (Glaxo suspended whooping cough vaccine)	3 years after primary course (1 c.c. Glaxo suspended whooping cough vaccine)

In cases where an interval between any two doses of whooping cough vaccine is unusually long, e.g. because of intercurrent illness, the maximum intervals that should elapse between injections in the initial period of immunization should be as follows:—

Between first and second injections—3 months

Between second and third injections—6 months

The total numbers of children, in age groups, who received complete courses in 1955 and 1956

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		Totals	
	1955	1956	1955	1956	1955	1956	1955	1956	1955	1956	1955	1956
Under 1 ..	2,533	2,807	296	378	16	14	—	—	1	2	2,846	3,205
1—2	519	449	126	134	91	66	—	—	4	—	740	649
2—3	146	74	45	31	48	60	—	—	3	—	242	165
3—4	85	49	22	22	24	33	—	—	—	—	131	104
4—5	37	17	10	15	6	17	—	—	—	—	53	49
	3,320	3,396	499	580	185	190	—	—	8	2	4,012	4,168

The total numbers of children, in age groups, who received reinforcing injections in 1955 and 1956

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		Totals	
	1955	1956	1955	1956	1955	1956	1955	1956	1955	1956	1955	1956
Under 1 ..	—	—	—	—	—	—	—	—	—	—	—	—
1—2	—	—	—	—	—	1	—	—	—	—	—	—
2—3	—	5	5	1	—	—	—	—	—	—	5	—
3—4	107	67	4	1	2	2	1	—	—	—	114	72
4—5	309	226	12	10	3	17	—	—	1	—	325	255
	416	298	21	12	5	20	1	—	1	—	444	337

Poliomyelitis vaccination

The scheme of vaccination against poliomyelitis of children in the city, initiated by Ministry of Health Circular 2/56, was approved by the Council in March, 1956. It will be appreciated that a full report on the clinical and scientific evaluations of the vaccinations completed so far cannot yet be presented because this aspect of the work has not been completed by the Ministry of Health, the Medical Research Council and other authorities involved.

On 1st March, 1956, letters were sent out from the Department to the parents or guardians of 89,515 children in the city who were born between 1947 and 1954 explaining the scheme and enclosing a pre-paid postage card form of registration and consent to vaccination for completion and return to the Department. At the same time, an explanatory letter about the scheme was sent to every medical practitioner in the City.

A total of 31,734 children were registered for vaccination; these included 16,135 boys and 15,599 girls. An official return of these registrations was forwarded to the Ministry of Health, according to the directions received.

Children to be vaccinated with the supplies of "Polivirin" vaccine which became available during the months of May and June, 1956, were selected by their month of birth on the advice of the Medical Research Council, as authorized by the Ministry. The selected months of birth were, inclusively, November, 1947 to 1954 (2,308 registered children), March, 1951 to 1954 (1,092 registered children) with August, 1947 to 1954 as reserve months should sufficient vaccine become available (2,638 registered children), covering a total of 6,038 registered children.

The first supply of vaccine, nominally 3,568 c.c., reached the Department on 4th May, 1956. Some of the vaccine was contained in 1 c.c. ampoules and some in 10 c.c. vials; each 10 c.c. vial contained a small surplus of vaccine to allow for loss in the filling of syringes. All the children born in the selected months were invited to receive their first injections and these were given to the children accepting the invitations by medical officers engaged in the Maternity and Child Welfare and School Health services, at various Corporation centres and clinics throughout the City, between 8th and 18th May, 1956; a second supply of vaccine, 3,402 c.c., arrived on 30th May, 1956, and second injections were given to the majority of these children between 31st May and 8th June, 1956.

Concurrently with the general scheme, a special scheme of vaccination was undertaken in connection with an investigation conducted, on behalf of the Medical Research Council, at the University of Manchester. This investigation involved the taking of blood samples before vaccination (with the consent and co-operation of the parents or guardians concerned) from a group of children selected at random from those registered and the taking of further blood samples from these children after they had received their second injections of vaccine. Special, additional, supplies of vaccine were provided for this purpose in instances when the children involved were not born in the "selected months".

A further supply of 188 c.c. of vaccine was received on 28th November, 1956, to administer as second injections to some children who had received only one injection in May, 1956. Special vaccination sessions have been held for this purpose and, at the moment, there is a residual number of 35 children who, for various reasons, have not yet responded to requests to attend for their second injections.

The following is a summary of the vaccine received and the vaccinations performed:—

Nominal amounts of vaccine received:—

(a) Ministry of Health—first issue	3,568 c.c.	
(b) Ministry of Health—second issue	3,402 c.c.	
(c) Ministry of Health—third issue	188 c.c.	
(d) Medical Research Council investigation	270 c.c.	7,428 c.c.
		<hr/>
Amount of vaccine used		7,388 c.c.
		<hr/>
Balance unused		40 c.c.
		<hr/>
Number of children requested to attend for vaccination		4,843
Number of children receiving two injections		3,797
Number of children receiving one injection		35
Total number of children given injections		3,832

The number of children who attended for pre-vaccination blood tests for the Medical Research Council investigation was 189. Of these 167 received two vaccinating injections and each had a further blood test. The remaining 22 children were withdrawn from the investigation at different stages. A further 187 blood samples have been taken recently from another group of registered children prior to their vaccination as part of the investigation.

Throughout the course of the scheme “follow-up” investigations of children vaccinated were conducted by health visitors and school nurses with the object of ascertaining whether or not any special or unusual effects were experienced from the vaccinations; these investigations did not reveal any untoward reactions.

Two of the children vaccinated were notified and confirmed as cases of active poliomyelitis of the non-paralytic type in 1956; one of these children developed the disease 46 days after receiving the second injection of vaccine and the other child developed the disease 72 days after the second injection.

Summary of immunization procedures

The following extended times for immunization and vaccination have been adopted; the length of the interval is determined after assessment of the conditions of the child:—

Age	Type of immunization or vaccination
1 to 4 months	Smallpox vaccination
3 to 7 months	Whooping cough immunization
6 months and over	Diphtheria immunization
2 to 9 years	Poliomyelitis vaccination*

*Children were selected by month of birth in each year of the 2 to 9 age group according to the Ministry of Health's scheme. The remainder of the children registered are to be vaccinated in 1957.

Supplies of A.P.T. and T.A.F. for use in diphtheria immunization and suspended whooping cough vaccine are obtainable on request from the Department. It is probable that some modification of the antigens to be used in immunization against diphtheria may be advocated by the Ministry of Health in view of the recent publication of the Medical Research Council on poliomyelitis and prophylactic inoculation.

Smallpox

No case of smallpox occurred in Manchester during the year.

Diphtheria

A satisfactory feature of 1956 and a very pleasant duty to record, was the complete absence of diphtheria in the City; indeed, one case only has occurred during the past three years. Such a lack of incidence in the child population enhances the protective value of immunization, and gives reason to hope that the disease has been controlled but efforts to immunize more children cannot be relaxed and parents must not be allowed to assume that diphtheria infection has disappeared. Seven suspected cases of diphtheria were removed to hospital during the year, but the diagnoses proved to be glandular fever, 2, tonsillitis, 3, thrush, 1 and stomatitis 1.

The following table shows the annual total of confirmed cases since 1947:—

Year	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Number of cases	80	43	22	22	10	7	7	—	1	—

Confirmed cases of diphtheria and deaths in relation to immunization—1952–1956:—

	Confirmed cases					Age (in years)	Deaths				
	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
Confirmed immunized	—	—	—	—	—	Under 1	—	—	—	—	—
Confirmed immunized	—	—	—	—	—		—	—	—	—	—
Confirmed immunized	—	1	—	1	—	1– 4	—	—	—	—	—
Confirmed immunized	—	—	—	*1	—		—	—	—	—	—
Confirmed immunized	4	1	—	—	—	5– 9	1	—	—	—	—
Confirmed immunized	—	—	—	—	—		—	—	—	—	—
Confirmed immunized	—	3	—	—	—	10–14	—	—	—	—	—
Confirmed immunized	—	†1	—	—	—		—	—	—	—	—
Confirmed immunized	4	5	—	1	—	Total under 15 years	1	—	—	—	—
Confirmed immunized	—	†1	—	*1	—		—	—	—	—	—

*Incomplete course of immunization

†P.T.A.P.

Mortality

Nil.

‘Carriers’ and the virulence test

None.

Supply of antitoxin

Under the National Health Service Acts, the responsibility for the provision of antitoxin for use by general practitioners, when required, has been taken over by the Manchester Regional Hospital Board. Arrangements continue whereby supplies of antitoxin are available at certain hospitals and fire stations in the City.

Meningococcal infection

The incidence of meningococcal meningitis—28 confirmed cases, was slightly more than the previous year (22 cases), and one more than the annual average for the past five years. The diagnoses of three of the nine patients removed to isolation hospital were amended from suspected poliomyelitis to meningococcal meningitis. Eighteen cases were admitted and treated in other hospitals in the City, and one baby aged 8 months died at home and was certified by the City Coroner. There was an increase in the number of fatal cases ascribed to this condition from 3 in 1955 to 8 in 1956, and a case fatality rate of 28·6 compared with 13·6 in 1955. As will be seen from the following table nearly twice as many males as females were affected, with the occurrence of cases evenly spread over the year.

Cases of meningococcal infection, in quarters of the year, age groups and sexes :-

	1st quarter		2nd quarter		3rd quarter		4th quarter		Totals		Deaths	
	M	F	M	F	M	F	M	F	M	F	M	F
Under 5 years	3	5	5	2	3	2	6	—	17	9	4	4
5—9 "	—	—	—	—	—	1	—	—	—	1	—	—
10—14 "	—	—	—	—	—	—	—	—	—	—	—	—
15—19 "	1	—	—	—	—	—	—	—	1	—	—	—
20—24 "	—	—	—	—	—	—	—	—	—	—	—	—
25—34 "	—	—	—	—	—	—	—	—	—	—	—	—
35 and over ..	—	—	—	—	—	—	—	—	—	—	—	—
All ages	4	5	5	2	3	3	6	—	18	10	4	4

Poliomyelitis

508 suspected cases of poliomyelitis were removed to hospital during the year, and of these 321 were considered by the hospital staff to be true cases of the disease. 93 of the cases were paralytic, and 228 non-paralytic. 8 deaths occurred.

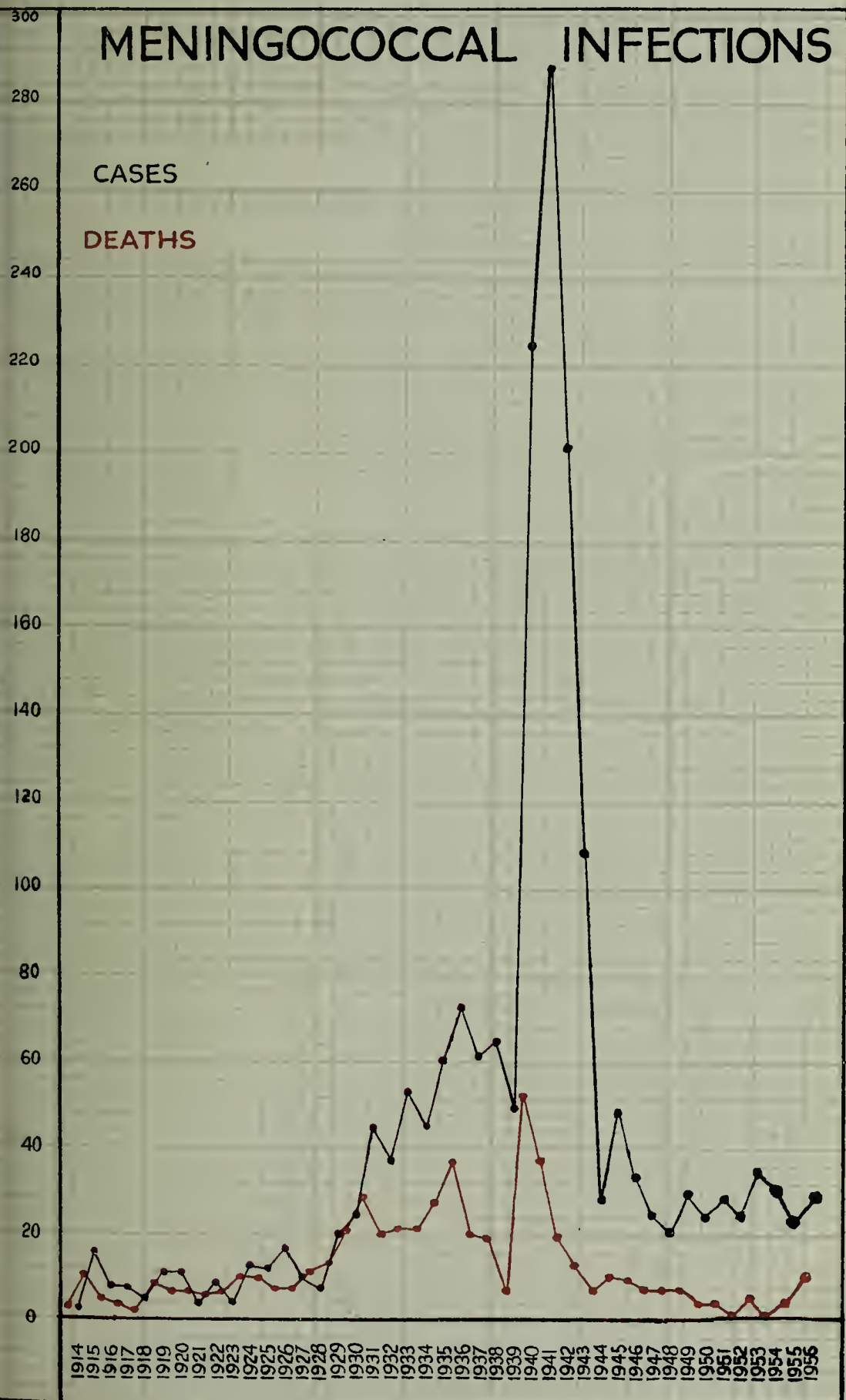
The total of 321 is the highest incidence recorded in Manchester since poliomyelitis was made notifiable in 1911; the previous highest figure occurred in 1947 when 123 cases occurred (90 paralytic, 33 non-paralytic with 13 deaths). It may be considered that, although the number of cases was nearly treble that of 1947, the outbreak does not appear to have been so severe. In each of the years in question the number of paralytic cases was approximately the same, while the case mortality rate in 1956 was 2·5 per cent. as compared with 10·6 per cent in 1947. This was due to the unprecedented number of non-paralytic cases in 1956, which occurred at the rate of more than two for every paralytic case instead of approximately one non-paralytic case for every two paralytic which is the usual expectation. It is customary too for the case mortality rate to vary between 5 and 10 per cent.

It is possible that the publicity given in the early part of the year to the Ministry of Health's scheme for vaccination against poliomyelitis, coupled with the measures taken early in the epidemic to inform medical practitioners in the City of the prevalence of the disease, were responsible for an increase in the numbers sent to hospital for diagnosis. At the same time, it must be remembered that there are other diseases giving symptoms similar to those seen in the early stages of true poliomyelitis but which do not cause paralysis.

MENINGOCOCCAL INFECTIONS

CASES

DEATHS





ACUTE POLIOMYELITIS

300

TOTAL CASES

PARALYTIC CASES (From 1947)

250

200

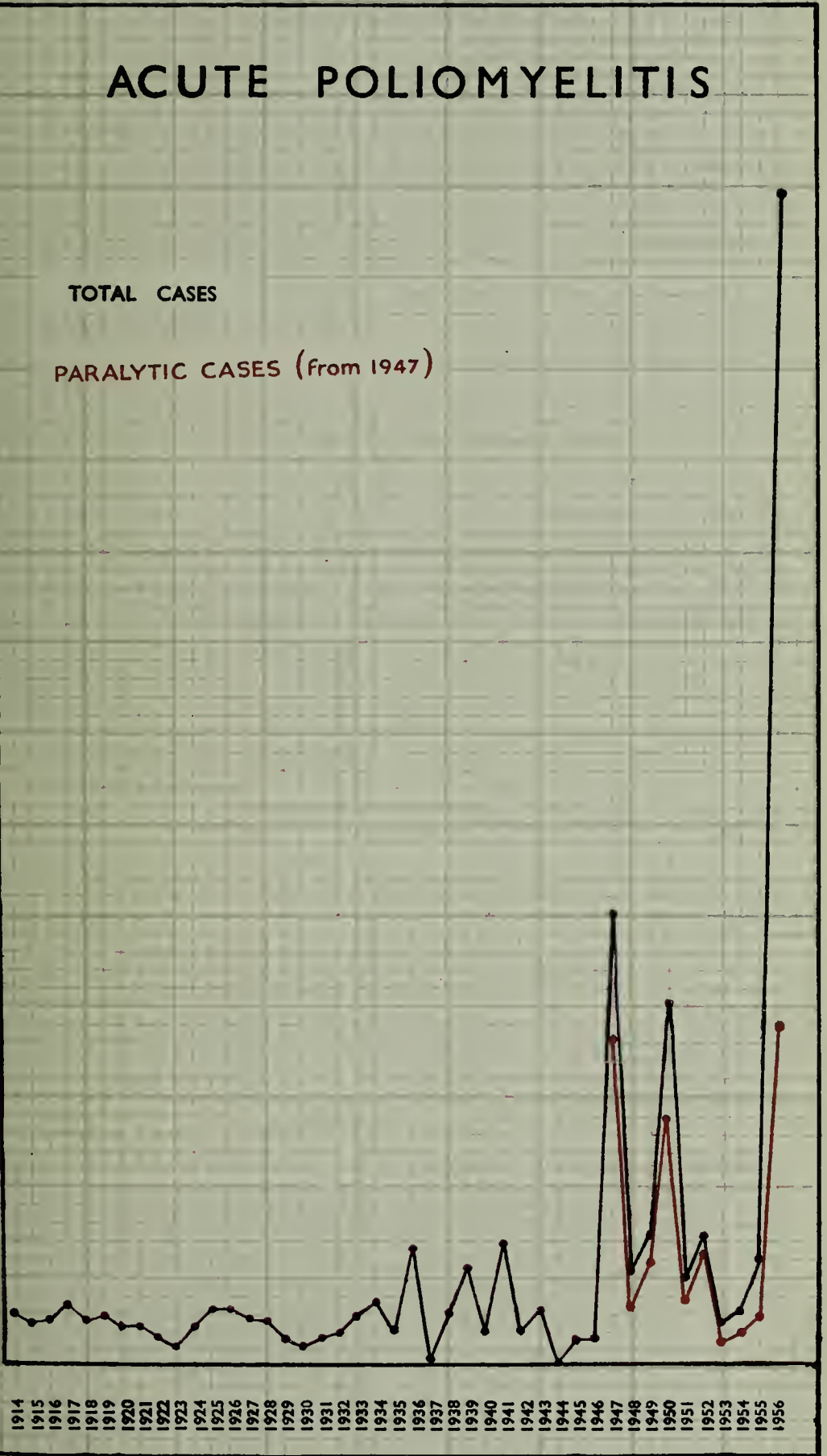
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1911-1912

1911-1912

In an endeavour to assess the true position, faeces from a number of cases diagnosed in hospital as non-paralytic poliomyelitis were examined at the University by Dr. Stones, Poliomyelitis Research Fellow. From 68 cases, poliomyelitis virus type 1 was isolated in 9, Coxsackie virus in 24 and in 35 cases no virus was isolated.

The examination of faeces for virus infection is a lengthy procedure and is of no help to the clinician or epidemiologist in so far as hospitalization of the case in the early stages is essential in order that the patient may have the necessary treatment at the earliest possible moment if paralysis ensues. It is interesting, however, to note that two virus infections were present in Manchester at the same time and that the isolation of Coxsackie virus was not achieved until the end of July, which corresponds with the time of the maximum incidence of non-paralytic cases.

In retrospect, therefore, it is apparent that during an epidemic of type 1 poliomyelitis, there occurred at the same time a number of cases of Coxsackie virus infection which were diagnosed as non-paralytic poliomyelitis, and it is now impossible to say how many of the cases recorded as non-paralytic poliomyelitis were true cases of that disease. This must be borne in mind when assessing the severity of the outbreak and the case mortality rate.

Course of the outbreak

Prior to, and including, the week ended 30th June, the number of confirmed cases recorded was 41 (32 paralytic and 9 non-paralytic), but from then on the incidence increased and the peak was reached in the week ended 28th July when 31 cases were confirmed (4 paralytic and 27 non-paralytic). Apart from minor peaks there was a gradual diminution of cases, and it was not till the end of October that there was any real recession.

The following are the statistics of the epidemic:—

Poliomyelitis, 1956

Suspected cases removed to hospital 508

Total confirmed cases 321

									Males	Females	Total
Paralytic cases	..	..	..	..	..	..	..	..	46	47	93
Non-paralytic cases		..	..	..	..	..	..	..	130	98	228
Deaths	..	..	..	..	..	..	..	..	5	3	8
Case mortality rate		..	..	..	..	..	..	..	—	—	2.5

Number of cases seen by medical officers of the Health

Department at request of general practitioners .. 68

Table I shows the incidence of onset of cases in weeks; table II gives an analysis of cases in certain age groups; table III summarizes the incidence of poliomyelitis and deaths during the past five years and table IV gives the number of paralytic and non-paralytic cases, in months of occurrence, in the various wards of the City.

On 25th June, 1956, a letter was sent to all general practitioners informing them of the possibility of an increased prevalence of the disease in the City, and stating that the Department would be glad to advise and assist on request in the diagnosis of suspected cases of poliomyelitis. This offer of assistance was readily accepted with the result that 68 cases were seen in consultation with doctors, and of these 44 were admitted to hospital and 29 subsequently confirmed as cases of poliomyelitis (21 non-paralytic); in addition, 1 paralytic case and 1 non-paralytic case were nursed at home.

In no instance was it possible to attribute the spread of cases to a known cause and it is of interest to note that in 20 households more than one case occurred. In three houses 3 non-paralytic cases occurred and in a further 12 houses 2 non-paralytic cases occurred in each house, while in the remaining 5 households 1 paralytic and 1 non-paralytic case occurred in each house.

Geographical distribution

All districts were more or less affected, with the majority of cases occurring in the southern districts of the City, especially in the more thickly populated areas of Moss Side East, Moss Side West and St. George's. In these three wards out of the 55 cases, only 7 patients proved to be paralytic poliomyelitis.

Seven of the 8 fatal cases were adults, and the geographical distribution was as follows:—3 in the northern, 4 in the southern and 1 in the eastern parts of Manchester.

Control measures

Extensive enquiries were made in each case with regard to the activities of patients prior to onset of illness and for possible sources of infection, but nothing out of the ordinary was ascertained. Family contacts, including school teachers, caretakers and school meal workers, were excluded from attending school for a period of 21 days, and patients were not allowed to return to school until the expiry of six weeks from the onset of the disease. Close co-operation with the Medical Research Council was maintained during the year and, at their request, a case report for each confirmed case of poliomyelitis occurring in children under 10 years of age was completed and returned. This report asked for identification particulars of the child and whether he or she (1) had been vaccinated, (2) had been registered for vaccination but not vaccinated or (3) had not been registered at all. In addition to this general measure, the Medical Research Council hoped to ascertain whether or not vaccinated children exposed to infection in their own homes were subject to less risk of contracting the disease than unvaccinated children. A second form was provided for recording particulars of household contacts of a case of poliomyelitis showing which of the children had been vaccinated or registered and giving details of the injections given to each child vaccinated.

Preventive measures :—

- (1) In June, a general recommendation to defer elective tonsillectomy until October at least was issued to hospital and ear and throat specialists because of the risk of increasing the rate of incidence of bulbar poliomyelitis.
- (2) Immunization procedures were suspended in May and June in relation to all children born between 1st January, 1947, and 31st December 1954, which was the age group of children selected by the Ministry of Health to receive injections under the poliomyelitis vaccination scheme.
- (3) Except for one or two instances, cases were removed to hospital not only to effect isolation but also to ensure that they received expert treatment at the earliest possible moment.
- (4) Parents were informed of the inadvisability of contacts attending crowded and ill-ventilated places or undertaking strenuous or excessive exercise. They were advised to supervise closely children's personal hygiene and in particular to ensure that they washed their hands thoroughly before meals.
- (5) Food handlers were excluded from duty for a period of three weeks from the date of last contact at home with a poliomyelitis case.

TABLE I
Showing incidence of onset of cases in weeks—1956

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Week ending	7 14 21 28	4 11 18 25	3 10 17 24 31	7 14 21 28	5 12 19 26	2 9 16 23 30	7 14 21 28	4 11 18 25	1 8 15 22 29	6 13 20 27	3 10 17 24	1 8 15 22 29	
Fatal.. .. .					1 2		1 1	2			1		8
Paralytic	1	1	1	2 1 2 2 6 1 5 2 6 5 7 6 7 3 2 5 3 1 1					4 1 2 1	1 1	1 1	1	85
Non-paralytic	1				1	1 1 2 4 2 13 16 20 17 19 15 24 8	7 14 10 12 7 9 5 2 1 4 3 1						228
Totals	1 1	1 1	1	2 1 2 4 4 7 2 7 6 8 18 24 27 24 17 29 11	8 15 10 12 11 10 11 6	2 2 5 3 2	1 1	3 2 1	1 1	1 1	1	1	321

TABLE II.

The sex and age distributions of the cases were as follows :—

			-1	1-2	3-4	5-9	10-14	15-24	25+	Totals
Paralytic	{ Male		—	10	9	11	2	4	10	46
	{ Female		2	6	9	11	8	3	8	47
Non-paralytic	{ Male		2	5	19	44	19	20	21	130
	{ Female		2	5	14	22	11	25	19	98
Totals	{ Male		2	15	28	55	21	24	31	176
	{ Female		4	11	23	33	19	28	27	145

TABLE III.

The following table shows the incidence of poliomyelitis and deaths during the past five years:—

Age groups	Cases															Deaths														
	1956			1955			1954			1953			1952			1956			1955			1954			1953			1952		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1 year	2	4	6	—	—	—	1	—	1	—	—	—	2	2	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
1—2 years	15	11	26	2	1	3	2	—	2	1	1	2	4	5	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3—4 years	28	23	51	4	1	5	1	—	1	1	1	2	1	6	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5—9 years	55	33	88	7	4	11	2	2	4	1	—	1	6	3	9	—	—	—	1	—	1	—	—	—	—	—	—	1	—	—
10—14 years	21	19	40	2	—	2	1	—	1	1	—	1	1	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—
15—24 years	24	28	52	2	2	4	1	1	2	2	—	2	3	1	4	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—
25 and over	31	27	58	1	3	4	1	1	2	2	1	3	1	2	3	3	2	5	—	—	—	—	—	—	—	—	—	—	—	—
Total	176	145	321	18	11	29	9	4	13	8	3	11	16	19	35	5	3	8	1	—	1	1	—	1	—	—	—	1	—	—

Particulars of the 93 paralytic cases are as follows:—

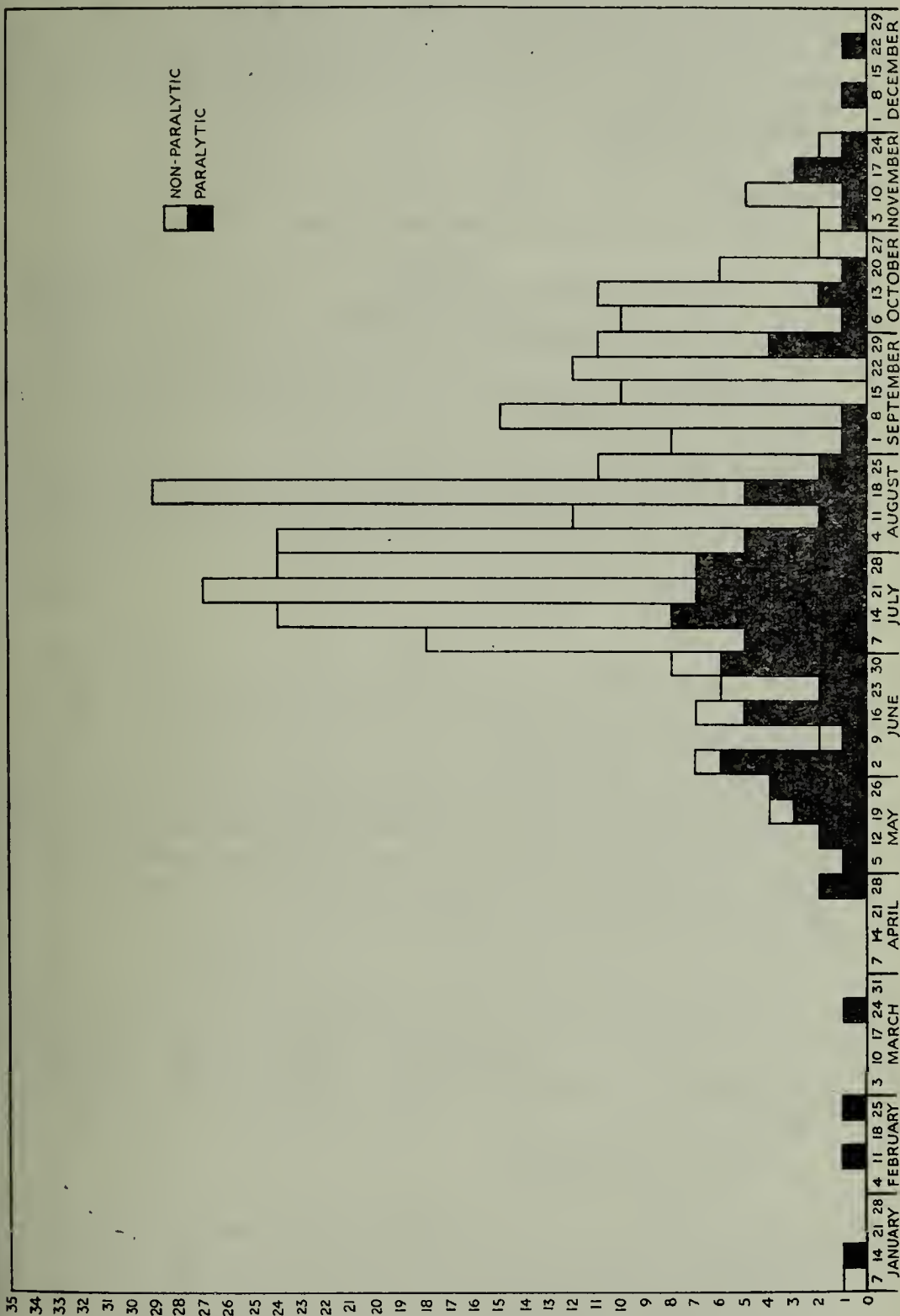
Sex	Age	City ward	Onset	Notified	Site of paralysis	Condition—February, 1957
F.	4	Woodhouse Park	11th Jan.	17th Jan.	Right arm	Arm paralysed; wears splint.
F.	1	Levenshulme ..	7th Feb.	23rd Feb.	Left leg	Improving; no calipers.
F.	18	Old Moat ..	20th Feb.	3rd March	?	Recovered; no paralysis.
M.	11	Gorton North ..	23rd March	28th March	Left leg	Improving; wears calipers.
M.	10	Northenden ..	26th April	30th April	Chest and right leg	Not completely recovered.
M.	1	Cheetham ..	2nd May	8th May	Left shoulder and deltoid	Slow improvement in use of hand.
F.	1½	Moston ..	8th May	14th May	?	Left the city
F.	4	Hugh Oldham ..	8th May	14th May	?	Recovered; no paralysis.
F.	5	Harpurhey ..	13th May	19th May	Left leg	Not completely recovered.
M.	8	Crumpsall ..	17th May	25th May	Left shoulder and thigh	Not completely recovered.
F.	7½	New Cross ..	21st May	26th May	?	Died.
F.	2½	Baguley ..	23rd May	26th May	Left arm and lower limbs	Slow recovery; wears calipers.
M.	21½	All Saints ..	23rd April	28th May	?	Recovered; no paralysis.
M.	28	Moss Side East	14th May	28th May	?	Died.
M.	1	Hugh Oldham ..	20th May	28th May	Right leg	Improving; wears calipers.
F.	7	Bradford ..	29th May	2nd June	Both legs	Improving; wears calipers.
F.	3½	Northenden ..	31st May	4th June	Left leg	Improving; wears calipers.
F.	9½	Openshaw ..	31st May	4th June	?	Recovered; no paralysis.
F.	2½	All Saints ..	29th May	5th June	Left leg	Great improvement.
M.	6	Rusholme ..	2nd June	5th June	Left leg	Recovered; no paralysis.
M.	4½	Harpurhey ..	30th May	8th June	Left facial	Recovered; no paralysis.
M.	4	Moss Side East	8th June	11th June	Left leg	Improving; wears calipers.
F.	9	Baguley ..	12th June	15th June	Rt. side, arm and leg	Not completely recovered.
F.	12	Crumpsall ..	15th June	18th June	?	Recovered; no paralysis.
F.	11	St. Mark's ..	13th June	20th June	Left thigh	Recovered; no paralysis.
F.	28	Alexandra Park	12th June	19th June	Abdominal muscles	Recovered; no paralysis.
M.	4½	Blackley ..	14th June	20th June	Left facial	Recovered; no paralysis.
F.	11	Newton Heath	22nd June	23rd June	Left leg	Recovered; no paralysis.
M.	29	Moston ..	20th May	26th June	?	Died.
M.	11	Moss Side West	26th June	29th June	Right leg	Slow progress; disease of hip.
M.	5	Moston ..	20th June	28th June	Left leg	Improving; no calipers.
M.	4½	Beswick ..	28th June	30th June	?	Recovered; no paralysis.
M.	4	Lightbourne ..	28th June	2nd July	Left leg	Slight improvement; calipers.
F.	11	Blackley ..	30th June	3rd July	Arm and leg	Recovered; no paralysis.
M.	2½	Baguley ..	28th June	2nd July	Lower limbs R-face	Slow recovery; wears calipers.
M.	29	Crumpsall ..	2nd July	6th July	Back and both legs	Slight improvement; wears calipers.
M.	25	Crumpsall ..	3rd July	9th July	Legs	Recovered; no paralysis.
M.	2½	Moss Side East	5th July	9th July	Left leg	Slight paralysis; improving.
M.	2	Barlow Moor ..	27th June	11th July	Face	Recovered; no paralysis.
F.	3	Bradford ..	10th July	12th July	Both legs	Improving; calipers left leg.
F.	5½	Northenden ..	7th July	13th July	Legs and abd. muscles	Improving; calipers right leg.
M.	7	Withington ..	11th July	13th July	?	Left the city
F.	31	Benchill ..	13th July	16th July	?	Died.
M.	20	Harpurhey ..	11th July	16th July	Right leg	Not completely recovered; calipers.
M.	9	Old Moat ..	11th July	16th July	Right arm	Slight improvement; lost grip.
M.	3	Northenden ..	5th July	18th July	Right facial	Recovered; no paralysis.
F.	3	Barlow Moor ..	13th July	19th July	Right leg	Great improvement; wears calipers.
M.	22	Lightbourne ..	15th July	20th July	?	Died.
M.	2	Barlow Moor ..	19th July	21st July	?	Recovered; no paralysis.
M.	4	Rusholme ..	16th July	21st July	Right leg	Recovered; no paralysis.
F.	3½	Longsight ..	21st July	23rd July	Left shoulder and leg	Much improved.
M.	29	Crumpsall ..	17th July	24th July	Left leg	Improving; slight limp.
M.	9	Northenden ..	20th July	24th July	Both legs, right arm	Slow recovery; wears calipers.
M.	4	St. Luke's ..	12th July	24th July	Left leg	Not completely recovered; calipers.
F.	18	Moss Side East	22nd July	30th July	?	Left the city
F.	27	Northenden ..	27th July	30th July	Both legs and spine	Slight improvement.
M.	5	C.-c.-Hardy ..	11th July	1st Aug.	Right leg	Recovering; slight limp.
F.	6	Moss Side West	28th July	1st Aug.	?	Recovered; no paralysis.
F.	29	Woodhouse Park	30th July	2nd Aug.	?	Died.
M.	6	Old Moat ..	29th July	2nd Aug.	Left facial	Recovered; no paralysis.
M.	5	Northenden ..	25th July	2nd Aug.	Right leg and side	Recovering; slight limp.
F.	6	C.-c.-Hardy ..	31st July	3rd Aug.	Right leg, arm and hand	Slight improvement.
F.	25	Old Moat ..	29th July	3rd Aug.	?	Recovered; no paralysis.
F.	11	Burnage ..	22nd July	3rd Aug.	Left deltoid	Recovered; no paralysis.
F.	3	Northenden ..	28th July	4th Aug.	Both legs and spine	Great improvement.
M.	34	Baguley ..	31st July	6th Aug.	?	Died.
M.	36	Baguley ..	10th Aug.	13th Aug.	All extremities	Slow recovery; wears calipers.
M.	5	St. Luke's ..	12th Aug.	14th Aug.	Right leg	Improving; wears calipers.
F.	35	Northenden ..	9th Aug.	14th Aug.	Both legs	Recovery not complete.
F.	3½	Gorton North ..	27th July	15th Aug.	Left foot	Slow recovery; wears calipers.
F.	10	Woodhouse Pk.	13th Aug.	16th Aug.	?	Recovered; no paralysis.
F.	6	Bradford ..	17th Aug.	20th Aug.	Right facial	Recovered; no paralysis.
F.	22	Crumpsall ..	20th Aug.	22nd Aug.	Left leg	Recovered; no paralysis.
M.	32	Northenden ..	20th Aug.	23rd Aug.	Both legs	Recovering; wears calipers.
M.	25	Openshaw ..	22nd Aug.	28th Aug.	Both legs	Recovering; slight improvement.
M.	10	St. Luke's ..	18th Aug.	29th Aug.	Arms and left leg	Hospital, slight improvement.
F.	13	Woodhouse Pk.	27th Aug.	1st Sept.	Muscles, cervical region	Recovered; no paralysis.
F.	10½	Baguley ..	20th July	4th Sept.	Right leg	Improving; no definite paralysis.
M.	32	Moss Side East	17th Aug.	4th Sept.	?	Recovered; no paralysis.
F.	26	Moston ..	4th Sept.	11th Sept.	Right arm	Recovering, slight paralysis.

(continued overleaf)

Age	City ward	Onset	Notified	Site of paralysis	Condition—February, 1957
19	Cheetham ..	25th Sept.	1st Oct.	Right leg	Gradual improvement, calipers.
1	Woodhouse Pk.	27th Sept.	1st Oct.	Right shoulder	Gradual recovery; wears splint.
7	Baguley	26th Sept.	3rd Oct.	Lower limbs	Hospital, wears calipers.
3	Old Moat	24th Sept.	5th Oct.	Right leg	Gradual improvement; wears calipers.
9	Beswick	3rd Oct.	8th Oct.	Both legs	Hospital; slight improvement.
9	Baguley	9th Oct.	13th Oct.	Right thigh	Recovered; no paralysis.
7	Baguley	13th Oct.	15th Oct.	Left arm	Recovered; no paralysis.
4	New Cross ..	15th Oct.	18th Oct.	Both legs	Hospital, slow recovery.
22	Longsight ..	2nd Nov.	6th Nov.	?	Died.
11	Didsbury	10th Nov.	21st Nov.	Right leg	Slight improvement, wears calipers
12	Levenshulme ..	23rd Nov.	26th Nov.	Left facial	Recovered; no paralysis.
11	Collegiate ..	2nd Dec.	3rd Dec.	Both legs	Recovered; no paralysis.
27	Didsbury ..	20th Dec.	24th Dec.	Arms, legs and lungs	Hospital, very slow recovery.

Table showing the distribution of cases of poliomyelitis in City wards and the health of paralytic cases in February, 1957

CITY WARD	Notifications		Confirmed cases		Paralytic		Non-paralytic		Deaths		Condition—February, 1957				Unob- tained
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Paralytic		Recovered; no paralysis		
											M.	F.	M.	F.	
Alexandra Park	9	7	4	6	—	1	4	5	—	—	—	—	—	1	—
All Saints	13	3	12	2	1	1	11	1	—	—	—	—	1	—	—
Ardwick	8	3	4	1	—	—	4	1	—	—	—	—	—	—	—
Baguley	13	9	11	10	4	5	7	5	1	1	2	3	1	2	—
Barlow Moor	7	2	4	2	2	1	2	2	—	—	—	—	—	—	—
Benchill	6	5	4	3	—	1	4	4	1	—	—	—	1	—	—
Beswick	7	6	5	5	1	1	4	4	1	—	—	—	1	1	—
Blackley	9	3	6	2	1	1	5	1	—	—	—	—	1	1	—
Bradford	4	8	4	6	—	3	4	3	—	—	—	—	2	1	—
Burnage	—	7	—	3	—	1	—	—	—	—	—	—	—	1	—
Cheetham	5	2	4	1	2	—	2	2	—	—	—	2	—	—	—
Chorlton-cum-Hardy	4	3	3	3	1	1	2	1	—	—	—	1	—	—	—
Collegiate Church	2	2	1	1	—	1	1	1	—	—	—	—	—	1	—
Crumpsall	6	8	5	5	4	2	1	1	—	—	—	3	1	2	—
Didsbury	1	3	—	3	—	—	—	—	—	—	—	—	—	—	—
Gorton North	3	3	3	2	1	1	2	1	—	—	—	1	—	—	—
Gorton South	3	—	2	1	—	—	2	3	—	—	—	—	1	—	—
Harpurhey	6	2	5	1	2	1	1	1	—	—	—	—	—	—	—
Hugh Oldham	4	7	2	2	1	1	2	1	—	—	—	—	—	1	—
Levenshulme	2	6	2	5	—	2	2	3	—	—	—	—	—	1	—
Lightbourne	4	1	4	1	—	—	2	1	—	—	—	—	—	—	—
Longsight	10	8	10	6	1	1	9	5	—	—	—	—	—	—	—
Miles Platting	2	1	1	—	—	—	1	—	—	—	—	—	—	—	—
Moss Side East	10	8	9	5	4	1	6	4	1	1	2	—	1	1	—
Moss Side West	17	14	13	10	1	1	11	9	—	—	—	2	—	—	—
Moston	6	5	5	2	2	2	3	2	1	1	1	1	—	—	—
New Cross	9	8	6	3	—	1	5	—	—	—	—	—	—	—	—
Newton Heath	3	2	1	1	—	1	1	—	—	—	—	—	—	—	—
Northenden	12	9	8	8	5	5	3	3	—	—	—	4	5	1	—
Old Moat	6	7	5	5	2	1	3	2	—	—	—	1	1	2	—
Openshaw	5	6	4	3	1	1	3	2	—	—	—	—	—	1	—
Rusholme	2	3	2	3	2	—	—	—	—	—	—	—	—	—	—
St. George's	11	12	7	11	—	—	7	11	—	—	—	—	—	—	—
St. Luke's	9	8	7	6	3	—	4	6	—	—	—	—	—	1	—
St. Mark's	—	5	—	3	—	1	—	—	—	—	—	—	—	—	—
St. Peter's	1	3	—	1	—	—	—	—	—	—	—	—	—	—	—
Withington	6	4	4	3	1	—	—	2	—	—	—	—	—	—	—
Woodhouse Park	11	13	9	10	1	4	8	3	—	—	—	1	1	2	—



Acute encephalitis (infective—post-infectious)

Two cases of acute encephalitis (infective) were reported in the year 1956. One patient, a female of 23 years was admitted to hospital where the diagnosis was revised to poliomyelitis (non-paralytic). The second case, a woman of 26 years died two days after admission to hospital; the registered cause of death being (a) encephalitis virus, (b) mitral stenosis, but there was no history of the deceased woman having suffered from an infectious disease at any time prior to removal to hospital.

Pneumonia

There were 334 cases of pneumonia notified, consisting of:—

Primary pneumonia	{	lobar	193	} 334
		lobular	68	
		unclassified	56	
Influenzal pneumonia		.. .. .	17	

Investigations were carried out in the majority of the cases; 62 of the cases were treated in hospital.

There were 346 deaths, 67 lobar, 265 lobular and 14 unclassified. In addition, there were 16 deaths from influenza associated with pneumonia.

Malaria

No notification was received.

Anthrax

No case of anthrax came to the notice of the Department.

Measles and German measles

There was a considerable decrease in the notifications of measles during 1956, which numbered 2,223, or 4,291 less than in the previous year, and was the lowest incidence recorded since 1939. In the first three-quarters of the year the number of cases registered was low (637), subsequently rising in the 4th quarter to 1,586 cases, or 71·3 per cent. of the total reported, which perhaps signifies the beginning of an outbreak of measles.

Cases notified	1956				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
MEASLES—					
By medical practitioners	197	141	263	1,547	2,148
„ others (parents, health visitors and school authorities) ..	9	9	18	39	65
Totals	206	150	281	1,586	2,223
GERMAN MEASLES—					
By medical practitioners	273	474	288	196	1,231
„ others (parents, health visitors and school authorities) ..	7	17	20	6	50
Totals	280	491	308	202	1,281

Whooping cough

There was a slight increase in the incidence of whooping-cough compared with the previous two years; 1,751 cases were notified against 1,106 in 1955 and 1,642 in 1954. The number of children under one year of age affected was 213, or 12·2 per cent. of the cases notified, compared with 142 and 12·8 per cent. in 1955 and 182 or 11·1 per cent. in 1954.

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
485	498	423	345	1,751

Typhoid fever

Notifications during the year numbered two, one of which was revised, as the patient was found to be suffering from ulcerative colitis; the other case, a youth aged 19 years, was confirmed bacteriologically. The date of onset of the illness was the 25th August, and he was removed to hospital on the 15th September, and discharged six weeks later. It appears that the patient was one of a party of students who visited Rome from the 1st to the 13th August, and it seems significant that another member of the party, who lived outside the City, contracted the disease about the same time, so that in all probability the infection was contracted abroad. Four members of the patient's family were subjected to bacteriological tests as soon as the illness was confirmed, and again one month later, and all gave negative results. The salmonella typhi isolated belonged to vi-phage DI.

Paratyphoid fever

15 cases of paratyphoid fever came to the notice of the Department and were confined solely to three separate families. Five children of one family were removed to hospital at the end of April, and in two of the cases the causative organism was isolated and found to be salmonella paratyphi B, phage-type *dundee*. No results of phage typing were received in respect of the other three children. The second occurrence was the end of May when a faecal specimen from a girl aged 3½ years proved positive and she was removed to hospital. Full investigations were made and faecal specimens obtained from the remainder of the family, and other relations in the home; the findings were positive in 5 instances—4 male adults and 1 girl aged 6½ years. As the cases showed no symptoms, and were considered of a mild character; they were treated at home by their own doctor. The organisms in the faeces of the six patients belonged to phage-type *dundee*. The last family to be affected, a mother and her three young daughters, were removed to hospital at the end of October. The progress of the disease in each case was uneventful and no possible source of infection was discovered. The salmonella paratyphi B isolated from the faeces suggested that they were related to phage-type *jersey*.

Dysentery

There was a decrease of 495 in the number of cases of dysentery notified and accepted in the year compared with the previous year—563 in 1956 as against 1,058 in 1955—467 or 83 per cent. occurring in the first six months of the year. The main sources of infection were among children attending day nurseries or schools, and other members of the patients' family; in fact, 206 confirmed cases, or nearly 37 per cent. of the total, occurred in day nurseries. There is no

doubt, however, that the incidence of this disease was appreciably higher than the notification figures suggest and that because of the mildness of the illness general practitioners were not consulted. In 514 cases the disease was attributable to *Sh. sonnei*, 20 to *Sh. flexneri* and 1 *amoebic*, and in the remaining 28 the causative organism was not identified.

The following table shows corrected notifications by quarters of the year and by sex:—

	Males	Females	Totals
1st quarter	158	148	306
2nd quarter	66	95	161
3rd quarter	27	22	49
4th quarter	25	22	47
Totals	276	287	563

The notifications were almost equally divided between the sexes, 276 male and 287 females, and those relating to children under 15 years of age accounted for 82 per cent. of the total.

Classification of cases of dysentery in various age groups are as follows:—

Age group	Males	Females	Totals
Under 5 years	190	164	354
5—14 years	58	54	112
Totals	248	218	466
15 years and over	28	69	97
Totals	276	287	563

Scarlet fever

There was a further decrease in the incidence of this disease, as the total number of 527 notifications received during the year is the lowest ever recorded. 67 patients, or 12·7 per cent. of the total, were removed to hospital; the case mortality was nil.

Deaths from infectious diseases

The following figures indicate the causes of deaths from the more common diseases:—

Disease	Years	
	1951-55 average	1956
Measles	3	—
Whooping cough	4	—
Scarlet fever	—	—
Diphtheria	—	—
Influenza	90	35
Pneumonia (all forms)	363	346
Typhoid fever	—	—
Diarrhoeal disease	16	44
Pulmonary tuberculosis	221	101

Consultations

69 consultation visits were made by medical officers of the Department, at the request of medical practitioners in the City, in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt; 68 visits were in relation to suspected cases of poliomyelitis.

International certificates of vaccination

Under the International Sanitary Regulations, 1952, certificates of vaccination and inoculations issued to travellers and signed by doctors practising in the City are required to be checked, stamped and countersigned in the Department; 2,707 of such certificates were dealt with.

Food poisoning

No. of outbreaks	No. of cases	Single cases	Remarks
17	51		Agent identified
10	196		Agent unknown
		57	Agent identified
		8	Agent unknown
Totals .. <u>27</u>	<u>247</u>	<u>65</u>	
	<u>312</u>		
Summary : No. notified 86			
	No. ascertained	<u>226</u>	
	Total	<u>312</u>	

Brief details of the cases are contained in the following schedule of food poisoning incidents copied in the suggested form for annual returns to the Minister of Health as in Appendix D (ii) of the revised memorandum 188-Med. 1949 :—

Summary of
Cases where c

Outbreak caused by		Cases		Illness—clinical features			
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Duration
1. Not known	<i>S. typhimurium</i>	1	—	—	Abdominal pain over long period. Later—diarrhœa, blood and mucus present	Mild	Hospital
2. Not known	do.	1	2	—	Abdominal pain, diarrhœa—blood present; 2 symptomless	Mild	1
3. Not known	do.	2	1	—	Vomiting, diarrhœa, abdominal pain, blood in faeces	Mild	1
4. Not known	do.	1	1	—	Vomiting, diarrhœa, pyrexia, abdominal pain; 1 symptomless	Moderate	About
5. Not known	do.	1	—	—	Loose stools, vomiting, diarrhœa, blood in stools	Mild	Few
6. Not known	do.	1	—	—	—	—	Hospital
7. Not known	do.	1	—	—	Abdominal pain, vomiting, pyrexia, anorexia, diarrhœa	Moderate	Hospital
8. Not known	do.	1	—	—	Persistent diarrhœa	Mild	Few
9. Not known	do.	1	—	—	Diarrhœa, abdominal pain, anorexia	Mild	Few
10. Not known	do.	1	—	—	Loose stools—with blood ..	Mild	Hospital
11. Not known	do.	2	—	—	Diarrhœa, nausea, pyrexia; 1 symptomless	Mild	
12. Not known	do.	1	—	—	(Senile myocarditis)	Died	Hospital
13. Not known	do.	1	—	—	Loose stools	Mild	Hospital
14. Not known	do.	1	—	—	Diarrhœa, pyrexia, anorexia ..	Moderate	Hospital
15. Not known	do.	1	—	—	Diarrhœa, vomiting	Mild	2
16. Not known	do.	1	—	—	Vomiting, diarrhœa	Mild	1
17. Not known	do.	1	—	—	Ear discharge only	Mild	
18. Not known	do.	—	1	—	Loose stools—(? dysentery)	Mild	
19. Not known	do.	1	—	—	Diarrhœa, abdominal pain, pyrexia	Mild	Hospital
20. Not known	do.	1	—	—	Vomiting and diarrhœa	Mild	1
21. Not known	do.	1	—	—	Abdominal pain, diarrhœa, pyrexia	Mild	Hospital
22. Not known	do.	1	—	—	Abdominal pain, vomiting, pyrexia	Mild	Hospital
23. Not known	do.	1	—	—	(Whooping-cough)	Mild	Hospital
24. Not known	do.	1	—	—	Diarrhœa (? dysentery)	Mild	Hospital
25. Not known	do.	1	—	—	(? Dysentery) diarrhœa ..	Mild	Hospital

isoning 1956

ents were identified

Results of laboratory investigations			Other (faecal specimens)	Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Cases (faecal specimens)	Food samples	Food handlers (faecal specimens)					
+ve	—	—	2— negative	Home	Home	4	Not known.
+ve	—	—	3— negative	Home	Home	6	Relative visitor was "carrier."
+ve	—	—	1— negative	Home	Home	6	? Hospital infection.
+ve	—	—	2— negative		Home	4	Tinned beans suspected.
+ve	—	—	—	?	Home or school	?	Not known.
+ve	—	—	—	—	—	—	—
+ve	—	—	6— negative	?	? Restaurant	?	? Fried fish.
+ve	—	—	—	?	Home	3	Not known.
+ve	—	—	3— negative	?	?	?	Not known.
+ve	—	—	2— negative	?	Hospital	?	? Hospital infection.
+ve	—	—	2— negative	Home	Home	4	? Lightly cooked egg.
—	—	—	—	—	—	—	S. typhi-murium found at post-mortem.
+ve	—	—	4— negative	?	?	?	Routine check of stools at Institution.
+ve	—	—	—	?	?	?	? Hospital infection.
+ve	—	—	3— negative	Day nursery and home	Day nursery and home	?	Not known.
+ve	—	—	3— negative	do.	do.	?	Not known.
re swab in ear school clinic	—	—	6— negative	Home	Home	?	Not known. Has had treatment for ear trouble for years.
+ve	—	—	3— negative	Home	Home	4	Not known.
+ve	—	—	—	Home	Home	3	Not known.
+ve	—	—	—	Home	Home	9	Not known.
+ve	—	—	1— negative	Home	Home	2	Not known.
+ve	—	—	2— negative	Home	Home	4	? Processed meat.
+ve	—	—	—	Hospital	Hospital	?	Entered hospital with whooping-cough. Final diagnosis on discharge food poisoning.
+ve	—	—	—	Home	Home	4	Not known.
+ve	—	—	—	Home	Home	?	Not known.

Outbreak caused by		Cases		Average incubation	Illness—clinical features		
Food	Agent	Notified	Ascertained		Main symptoms	Severity	Duration
26. Not known	<i>S. typhimurium</i>	1	—	—	Abdominal pain and diarrhoea	Mild	2/3
27. Not known	do.	1	—	—	Vomiting, pyrexia and sore throat; (? poliomyelitis)	Mild	Hospitalized
28. Not known	do.	—	—	—	Vomiting, diarrhoea	Mild	Few
29. Not known	do.	—	1	—	Vomiting, diarrhoea, pyrexia, abdominal pain	Moderate	About
30. Not known	do.	1	—	—	Pyrexia, loose stools	Mild	Hospitalized
31. Not known	do.	1	—	—	Diarrhoea, nausea, vomiting, pyrexia	Mild	Few
32. Not known	do.	1	—	—	Vomiting, diarrhoea, pyrexia, anorexia	Moderate	Hospitalized
33. Not known	do.	1	—	—	Abdominal pain, diarrhoea, pyrexia, anorexia, vomiting	Moderate	Hospitalized
34. Not known	do.	2	—	—	Pyrexia, diarrhoea with blood; 1 symptomless	Mild	Few
35. Not known	do.	1	—	—	Diarrhoea and abdominal pain	Mild	Few
36. Not known	do.	1	—	—	Abdominal pain, diarrhoea ..	Mild	Hospitalized
37. Not known	do.	1	1	—	Abdominal pain, diarrhoea, vomiting; 1 symptomless	Mild	1
38. Not known	do.	1	4	—	Pyrexia, languor, vomiting, diarrhoea, abdominal pain; 4 symptomless	Mild	1
39. Not known	do.	1	2	—	(Confinement) 2 diarrhoea; 1 symptomless	Mild	2
40. Not known	do.	1	—	—	Entered hospital for abdominal hernia	Mild	Hospitalized
41. Not known	do.	1	—	—	Vomiting and loose stools ..	Mild	About
42. Not known	do.	1	—	—	Abdominal pain, vomiting	Moderate	Hospitalized
43. Not known	do.	1	3	—	Vomiting, diarrhoea, pyrexia; 3 symptomless	Mild	About
44. Not known	do.	1	—	—	Diarrhoea, abdominal pain, vomiting	Mild	Hospitalized
45. Not known	do.	1	—	—	Languor, diarrhoea, abdominal pain, anorexia	Moderate	About
46. Not known	do.	—	1	—	Symptomless	Mild	-
47. Not known	do.	1	—	—	Vomiting, diarrhoea	Mild	2/3
48. Not known	do.	1	—	—	Languor, abdominal pain, diarrhoea, pyrexia	Mild	Hospitalized
49. Not known	do.	1	3	—	Vomiting, diarrhoea, abdominal pain, pyrexia; 2 symptomless	Mild	Few
50. Not known	do.	1	2	—	Diarrhoea; 2 symptomless ..	Mild	1 hospitalized
51. Not known	do.	1	—	—	Diarrhoea—blood and mucus present	Mild	Few
52. Not known	do.	1	1	—	Vomiting, diarrhoea; 1 symptomless	Moderate	3 v
53. Not known	do.	1	—	—	Abdominal pain, vomiting, diarrhoea—blood present	Mild	Hospitalized
54. Not known	do.	1	3	—	Abdominal pain, diarrhoea; 3 symptomless	Mild	Few
55. Not known	do.	1	—	—	Languor, pyrexia, vomiting, diarrhoea	Mild	Hospitalized

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	School or home	School or home	?	? Minced meat.
—	—	2— negative	Home	Home	9	Not known.
—	—	—	Place of work	Place of work	?	Barmaid at hotel.
—	—	7— negative	Home	Home	8	? Custard.
—	—	—	Home	Home	5	Not known.
—	—	—	? On holiday tour	? On holiday tour	?	? Chicken and salad meal.
—	—	1— negative	Home and works canteen	Home and works canteen	?	Not known.
—	—	—	Home	Home	5	Not known.
—	—	5— negative	On day trip to seaside	On day trip to seaside	?	Not known.
—	—	—	Home	Home	4	Not known.
—	—	—	Home	Home	5	Not known.
—	—	2— negative	Home	Home	4	Not known.
—	—	—	Home	Home	5	Not known.
—	—	—	Hospital	Hospital	2	} Probably hospital infection. Cases associated.
—	—	—	Hospital	Hospital	1	
—	—	—	Home	Home	5	Not known.
—	—	—	Home	Home	7	Not known.
—	—	3— negative	Home	Home	7	? Raw sausage.
—	—	—	Home	Home	6	Not known.
—	—	4— negative	?	On holiday	?	Not known.
—	—	—	?	?	7	Attended open air school for children.
—	—	—	?	Home	7	Not known.
—	—	—	?	Home	?	Not known.
—	—	2— negative	—	Home	6	Not known.
—	—	6— negative	—	Home	9	Not known.
—	—	—	—	Home	4	Not known.
—	—	2— negative	—	Home	4	Not known.
—	—	—	—	Home	4	Not known.
—	—	6— negative	—	Home	10	Not known.
—	—	3— negative	—	Home	5	Not known.

Outbreak caused by		Cases		Illness—Clinical features			
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Duration
56. Not known . . .	<i>S. typhimurium</i>	1	—	—	Abdominal pain, nausea, vomiting, diarrhoea	Mild	Few days
57. Not known . . .	do.	1	—	—	Diarrhoea and abdominal pain	Mild	Few days
58. Not known . . .	do.	1	—	—	Diarrhoea and vomiting . .	Mild	Hospitalized
59. Not known . . .	do.	1	—	—	Abdominal pain, diarrhoea, vomiting	Mild	7-8 days
60. Not known . . .	<i>S. anatum</i>	1	—	—	Languor, vomiting, diarrhoea, pyrexia, abdominal pain	Mild	Few days
61. Not known . . .	do.	1	—	—	Diarrhoea	Mild	Hospitalized
62. Not known . . .	<i>S. worthington</i>	1	—	—	Loose stools—blood present	Mild	Few days
63. Not known . . .	<i>S. stanley</i>	1	—	—	Vomiting	Mild	Few days
64. Not known . . .	do.	1	—	—	Vomiting, diarrhoea . . .	Moderate	Hospitalized
65. Not known . . .	<i>S. thompson</i>	1	—	—	—	—	Hospitalized
66. Not known . . .	do.	1	—	—	Languor, anorexia, vomiting, diarrhoea, abdominal pain	Moderate	2-3 weeks
67. Not known . . .	do.	1	1	—	Diarrhoea, abdominal pain, vomiting; 1 symptomless	Moderate	Hospitalized
68. Not known . . .	<i>S. heidelberg</i>	1	—	—	Anorexia, vomiting, pyrexia, abdominal pain, diarrhoea	Mild	Few days
69. Not known . . .	<i>S. enteritidis</i>	1	—	—	Abdominal pain, vomiting, diarrhoea, pyrexia	Moderate	Hospitalized
70. Not known . . .	do.	1	—	—	Abdominal pain, vomiting, diarrhoea	Moderate to mild	Few days
71. Sandwiches of tinned salmon	<i>Staph. aureus</i>	—	5	4-5 hrs.	Vomiting, languor, pyrexia, diarrhoea	Mild	2-3 days
72. Russian sponge cake	do.	—	2	5-16 hrs.	Abdominal pain, vomiting, diarrhoea	Moderate	2-3 days
73. Tinned crab . . .	do.	—	3	4 hrs.	Diarrhoea, vomiting . . .	Moderate	1 hospital, few days
74. Not known . . .	Heat resistant <i>Cl. welchii</i>	1	—	—	Vomiting, diarrhoea . . .	Mild	2 days

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	1— negative	—	Home	2	? Meat pies.
—	—	4— negative	—	Home	5	? Soup.
—	—	4— negative	—	Home	5	Not known.
—	—	1— negative	—	Home	4	Not known.
—	—	4— negative	—	Home	5	Not known.
—	—	—	—	Home	3	Not known.
—	—	3— negative	—	Home	5	Not known.
—	—	4— negative	—	Home	5	Not known.
—	—	4— negative	—	Home	5	Not known.
—	—	—	—	—	—	Not known.
—	—	—	—	Home	?	Not known.
—	—	7— negative	—	Home	?	Not known.
—	—	4— negative	—	Home	5	Not known.
—	—	6— negative	—	?	?	Rodent operative. ? Duck egg.
—	—	—	—	?	?	? Meat pie.
Tin of salmon negative. Sandwich of tinned salmon +ve S. aureus. Tin of salmon examined by Public Analyst negative	—	—	Imported tinned salmon from Japan	Home	6	? Probably in preparation of sandwiches of tinned salmon.
Cake, filling and icing +ve staph. aureus	—	1— negative	Local confectioner's premises	Home	4	Not known.
Opened tin of crab +ve staph. aureus	—	—	Japanese origin	Home	4	Not known.
—	—	4— negative	—	Home	7	Not known.

Outbreak caused by		Cases		Illness—clinical features		
Food	Notified	Ascertained	Average incubation	Main symptoms	Severity	Duration
75. Not known	1	—	—	Vomiting, diarrhoea, pyrexia, abdominal pain	Mild	Few
76. Not known	7	—	12/13 hrs.	Slight abdominal pain and diarrhoea	Mild	Few
77. Not known	—	3	½ to 1 hr.	Nausea and vomiting	Mild	Few
78. Not known	—	26	7/12 hrs.	Abdominal pain, diarrhoea ..	Mild	24
79. Not known	—	14	Not known	Diarrhoea, abdominal pain; vomiting in some cases	Very mild	24
80. Not known	—	20	5 14 hrs.	Abdominal pain, nausea, diarrhoea; vomiting in some cases	Mild	24
81. Not known	—	36	9/24 hrs.	Abdominal pain, diarrhoea ..	Mild	24
82. Not known	1	—	1½ hrs.	Vomiting and diarrhoea..	Mild	36
83. Not known	1	—	21 hrs.	Abdominal pain, nausea, vomiting, diarrhoea	Mild	3
84. Not known	2	—	Not known	Nausea, feverishness, vomiting, headache, abdominal pain	Mild	2 3
85. Not known	1	—	24 hrs.	Abdominal pain, dizziness, vomiting, diarrhoea	Mild	3 4
86. Not known	—	1	Few hours	Vomiting.. .. .	Mild	Few
87. Not known	—	78	6 14 hrs.	Nausea, abdominal pain, diarrhoea, dizziness	Mild	1 2
88. Not known	—	8	9 12 hrs.	Abdominal pain, nausea, diarrhoea	Mild	Few
89. Not known	—	1	½ hour	Abdominal discomfort.. ..	Mild	Few
90. Not known	—	1	Not known	Vomiting, diarrhoea (asthma)	Moderate	Ho
91. Not known	1	—	Not known	Abdominal pain, nausea ..	Mild	2
92. Not known	1	1	12/14 hrs.	Diarrhoea, abdominal pain, nausea	Mild	2

re not found

Case (mens)	Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
	Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	—	Home	Home	4	Not known.
eg. heat at Cl. hii erred ient ce of eak	—	—	—	Home and local butcher's premises	Home	5	? Roast pork.
—	Milk, spent tea leaves, sugar—chemically—neg.	—	—	Brew of tea with milk and sugar added	Works	5	Illness commenced following drinking of tea.
eg.	—	2—negative	—	School meals kitchen	School canteen	98	? Roast pork.
eg.	—	—	—	Not known	Residential home for old people	?	Not known.
neg.	Roast beef—neg.	4—negative	—	Transport depot canteen kitchen	Transport depot canteen	58	Reheated roast beef suspected.
g.	—	—	—	School meal service central kitchen	School canteen	3,300	Cold roast beef suspected.
—	—	—	—	Local dealer	Home	1	? Stale corned beef suspected.
eg.	—	—	2—negative	Home	Home	3	Not known, ? duck egg.
eg.	—	—	—	Home	Home	?	Not known.
—	—	—	—	—	Cafe when delivering goods	?	? "Hot dogs."
—	—	—	—	—	Cafe	?	? Meat pie suspected.
4. g.	Pieces of cooked liver—neg.	—	—	School canteen kitchen	School canteen	263	Cooked liver suspected.
—	—	—	—	School kitchen	School canteen	220	Not known.
g.	Rock—neg.	—	—	Wales	Home	1	Rock suspected.
g.	—	—	—	Home	Home	5	Not known.
—	—	—	—	Home	Home	1	Not known.
g.	—	—	3—negative	Home	Home	4	Sausage suspected.

GENERAL MEDICAL SERVICES

The Health Department makes arrangements for the medical examination of Corporation employees for any purpose which is connected with the employment.

Entrants

Prior to 10th May, 1956, as in previous years, administrative, professional and technical staff entering the Corporation service were medically examined by independent specialists, in accordance with the regulations of the City Council. On 10th May, 1956, however, the Council approved a recommendation of the Organization and Methods Unit to discontinue, for an experimental period of twelve months, the medical examinations of new entrants to the service and to adopt instead a new procedure entailing the completion of a confidential medical questionnaire by each prospective new employee. Completed forms are sent to the Medical Officer of Health, who ascertains whether from the information given, the medical history of the candidate is satisfactory or whether a medical examination is required.

There are, however, members of the staff of the Health and Children departments who are required under the provisions of the combined Circular 64-50 from the Ministries of Health and Education and the Home Office relating to persons working with children, to have an X-ray examination on joining the service and at specified regular intervals afterwards. The X-ray examinations in these instances continue to be arranged by the Health Department.

The number of home helps employed increased in 1956 and, consequently the number of medical examinations of home helps by a medical officer of the Health Department increased also.

Medical examinations of some persons residing in Manchester who are recruited to the staffs of other authorities are arranged on behalf of the authorities. Manchester benefits from similar arrangements with other local authorities when a candidate who resides outside Manchester is appointed to the Corporation service and a medical examination is found to be necessary.

Retirement through incapacity

The Manchester Corporation Superannuation Scheme provides that applicants for retirement on superannuation through incapacity are to be medically examined under the direction of the Medical Officer of Health. If the person proves to be unfit to continue his work, the necessary certificate is signed. The Senior Medical Officer (Administrative) conducts the examinations.

Miscellaneous examinations

Medical examinations of sick employees are carried out at the request of Corporation committees. These requests are usually made when consideration has been given by a Committee to an application for an extension of sick leave pay from an employee of that particular Committee. In granting these extensions the committee concerned requests a medical report to be submitted to the next meeting. Requests for medical examinations are also made by Corporation committees when a member of the staff has been absent for some time due to sickness but has not made application to retire on medical grounds; the examinations are undertaken, also, by the Senior Medical Officer (Administrative.)

Staff welfare

There is a Staff Accident and Welfare Room for any of the Town Hall staff who happen to be involved in accidents or are taken ill whilst at work. Necessary treatment is available, both medical and nursing, and, during 1956, there were 95 persons so treated.

Details of the medical questionnaire forms examined and the medical examinations carried out by the medical staff of the Department and by independent specialists are shown in the following table:—

Medical examination of staff and entrants to the Corporation Service

Department	Medical examinations arranged—entrants	Medical questionnaire forms examined—entrants	Retirements on superannuation—staff	Miscellaneous—staff	Totals
Town Clerk's	9	6	1	—	16
Baths and Wash-houses ..	—	1	2	1	4
Children's.. .. .	42	26	3	1	72
City Architect's	20	15	5	1	41
City Surveyor and Engineer's	20	26	2	—	48
City Treasurer's	29	16	1	—	46
Cleansing	2	1	8	1	12
Housing	9	14	2	9	34
Markets	1	2	1	—	4
Parks and Cemeteries ..	—	5	5	1	11
Health	332	51	4	1	388
Stationery	1	3	—	—	4
Waterworks	19	29	6	—	54
Welfare Services	7	7	2	—	16
Airports	2	2	—	—	4
Probation Service	2	6	—	—	8
Transport	23	—	49	1	73
Libraries	10	36	—	1	47
Police	19	17	1	1	38
Weights and Measures ..	—	6	—	—	6
Education	—	—	7	—	7
Art Galleries	1	1	—	—	2
Totals	548	270	99	18	935
For other local authorities	21	—	—	—	21
GRAND TOTALS ..	569	270	99	18	956

NOTE—The medical examination of entrants into the service of the Education Department is arranged within the School Health Service.

MENTAL HEALTH SERVICE

Administration

Mental Health Sub-committee

The Mental Health Sub-committee, consisting of 15 members, is responsible through the Health Committee, for the operation of the Council's schemes under the Mental Deficiency Acts, 1913/1938, and the Lunacy and Mental Treatment Acts, 1890/1930, as amended by the National Health Service Act 1948/52. Meetings of the Sub-committee are held monthly.

Staff

The Medical Officer of Health is approved by the Minister of Health for the purpose of making recommendations for voluntary and temporary treatment under the Mental Treatment Act, 1930. In addition to the Medical Officer of Health, the Deputy Medical Officer of Health and the Senior Medical Officer (Administrative) are authorised by the local health authority to give medical certificates accompanying petitions to judicial authorities for Orders under the Mental Deficiency Acts, 1913/1938.

The initiation of proceedings for the care and treatment of persons suffering from mental illness is carried out by three male duly authorised officers, all qualified by experience, one holding the relieving officer's certificate. In August, 1956, two trainee duly authorised officers, both qualified mental nurses, were appointed, and their appointment as duly authorized officers after satisfactorily completing a year's training will considerably ease the work involved in maintaining the 24-hour duty rota which is necessary to deal with emergency cases.

The number of female mental health visitors employed in connection with the Council's responsibilities under Section 30 of the Mental Deficiency Act, 1913, was increased in August, 1956, from five to six. Two are qualified on grounds of experience, two have additional qualifications in mental or mental deficiency nursing and two are University graduates with training in social work.

Work in the care and after-care of mental illness is conducted by a qualified psychiatric social worker and a social worker, both female; a vacancy for a trainee psychiatric social worker has been unfilled since June, 1956.

No part-time staff are employed.

The following tables give details of staff employed in centres :—

Occupation centre staff

Occupation centre	Supervisor	Assistant supervisor	Domestic help	Part-time guides	Stock
Ancoats	—	2	1	1	—
Victoria Park	1	7	3	3	1
Wythenshawe	1	3	1	1	—
Totals	2	12	5	5	1

At 31st December, 1956, the posts of Supervisor, Ancoats Occupation Centre, and Assistant Supervisor, Victoria Park Occupation Centre, were unfilled.

One member of the staff is recognised as being qualified on grounds of experience, one is a qualified teacher, and four hold the diploma of the National Association for Mental Health.

	Instructor	Assistant instructor	Part-time guides
Adult industrial centre ..	1	1	2

Co-ordination with hospitals

The number of mental defectives on the Regional Hospital Board's waiting list continues to rise. At the end of the year the waiting list numbered 138, compared with 119 in 1955. It is to be hoped that the Regional Hospital Board's plans for an increase in mental deficiency accommodation will, in the near future, lead to a reduction of the number of Manchester cases awaiting admission.

The following table gives details of the sex, age and type of cases on the waiting list, together with an indication of the period of time which these patients have been waiting for admission:—

Type, age and sex distribution of mental defectives awaiting hospital admission

Time on waiting list	Males								Females								Totals
	Under 16				Over 16				Under 16				Over 16				
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	
Over 4 years	1	4	2	—	1	4	3	1	3	1	1	—	2	2	5	2	32
3-4 years	1	2	1	—	3	—	2	—	1	1	—	—	1	6	1	—	19
2-3 years	1	6	2	—	—	5	3	1	2	2	—	—	—	1	—	1	24
1-2 years	2	3	2	—	—	—	4	2	4	2	—	—	—	4	4	1	28
Under 1 year	4	2	3	—	—	5	3	4	3	—	2	1	—	2	3	3	35
Total numbers on waiting list at 31st December, 1956 ..	9	17	10	—	4	14	15	8	13	6	3	1	3	15	13	7	138

(a) cot and chair cases.
(b) ambulant low grade cases.

(c) medium grade cases.
(d) high grade cases.

59 cases were admitted to mental deficiency hospitals as shown in the following table:—

Mental defectives admitted to mental deficiency hospitals during 1956

Method of admission	Males		Females		Totals
	Under 16	Over 16	Under 16	Over 16	
Upon petition	4	9	5	8	26
Placed by parent	1	—	1	—	2
By Court Order	—	1	—	—	1
By Order of the Secretary of State..	—	—	2	—	2
Place of safety	—	—	1	—	1
Short-term care	4	6	6	10	26
Warding order	—	1	—	—	1
Totals	9	17	15	18	59

Details of the admissions to mental hospitals appear in the section dealing with the Lunacy and Mental Treatment Acts.

The Mental Health Service has continued to work in close collaboration with mental deficiency hospitals in providing domiciliary reports and in supervising patients on licence. The following table gives details :—

Social history, progress, licence and recertification reports

Type of report	Males		Females		Totals
	Under 16	Over 16	Under 16	Over 16	
Social history	19	20	14	18	71
Progress	2	79	—	29	110
Licence	8	139	4	76	227
Recertification	30	128	8	101	267
Totals	59	366	26	224	675

Voluntary associations

No duties are delegated to voluntary associations, but there is co-operation with the National Association for Mental Health for the provision of holiday accommodation for pupils of occupation centres and for the training of occupation centre staffs.

A valuable contribution to the care of mental defectives has been made by the use of homes run by voluntary bodies for the short-term care of patients in cases of urgency. The Mental Health Service has continued to use Orchard Dene Short-stay Home, Rainhill, near Liverpool; Redcourt Approved Home Glossop; Broomgrove, Victoria Park, Liverpool, and the Approved Home attached to the Manchester and District School for Jewish Handicapped Children. The reservation of a bed at Orchard Dene Short-stay Home from June to August has proved invaluable in maintaining a reserve bed at a time when short-term accommodation in mental deficiency hospitals and voluntary homes is at a premium. 31 patients (12 males and 19 females) received short term care in these homes.

In the provision of convalescent accommodation for patients discharged from mental hospitals there has been excellent co-operation with the Mental After-care Association and the Evelyn Devonshire Home, Buxton. A total of 8 patients were given convalescence by these means.

Mention should also be made of the excellent co-operation which the Mental Health Service has received from the Cripples Help Society in the care of physically handicapped mental defectives in their own homes.

Training of staff

In the absence of a national scheme for the training of entrants to the Mental Health Service, such training must be carried out on an in-service basis. In August, 1956, two trainee duly authorised officers were appointed. Both trainees are qualified mental nurses and, as such, have a sound clinical background in the field of mental illness. The training period is of one year's duration.

and consists primarily of practical work with experienced field workers in mental illness and mental deficiency. In addition, the trainees will spend a period working in the Adult Industrial Centre for male mental defectives and, through the co-operation of the National Association for Mental Health, they have attended selected sessions, 40 in all, at the Association's Northern course for staffs of occupation centres. After the satisfactory completion of their year's training, these officers will be appointed as duly authorised officers, and will be employed, as will the three present duly authorised officers, on duties in relation to mental illness and the supervision of adult male mental defectives.

One member of the occupation centre staff has again been seconded to the National Association for Mental Health course, and two members of the staff attended the refresher course held in London.

The National Association for Mental Health is to be congratulated on the inception of the Refresher Course for Mental Health Workers now being held in conjunction with the Department of Extra Mural Studies of Leeds University. The course consists of one month's residence at Leeds followed by 20 weekly casework seminars and a final week's residence. It is to be hoped that this course will form the basis of a national scheme of training. One member of the staff is at present attending the course, and approval has been given for a further member to attend the second course, starting in September, 1957.

Work in the community

Prevention, care and after-care

The following table gives details of the work done in relation to the prevention, care and after-care of mental illness:—

Care and after-care of mental illness

	Males	Females	Totals
Number of visits or interviews	514	1,282	1,796
Removed from care	68	119	187
Referred for medical report :—			
(a) to general medical practitioner	—	—	—
(b) to psychiatrist or clinic	37	49	86
Interviews with other agencies, departments or employers	62	75	137
Totals	681	1,525	2,206

The number of referrals to the care and after-care service is steadily increasing and it is becoming more and more recognised that skilled social case-work is of great importance in the rehabilitation of people who have suffered mental breakdown and in its prevention.

With the present staff employed in this branch of the service, it is impossible to devote an adequate amount of time to each case referred, and a decision has to be made as to the type of case to be selected on the grounds of greatest need for intensive case-work.

The services of Dr. Northage J. deV. Mather, as Consultant Psychiatrist to the Service have been of great value in enabling the workers to obtain specialist advice readily and to arrange consultations at the Town Hall. The latter are of great use, in making it possible to have patients seen who, although they are willing to come to the Town Hall, would be utterly opposed to attendance at an out-patients' clinic.

Liaison with mental hospitals in matters concerning the after-care of discharged patients has been satisfactorily maintained.

In certain cases breakdowns in mental health, due to bad housing conditions, have been averted by the award of medical priorities for re-housing.

Lunacy and Mental Treatment Acts

Lunacy and Mental Treatment Acts, 1890-1930 (a) ascertainment

Source of notification	Males	Females	Totals
General medical practitioners	213	314	527
Hospitals and clinics	89	72	161
Police authorities	33	15	48
Other Corporation departments	10	16	26
General public	30	27	57
Other sources	10	5	15
Totals	385	449	834

(b) disposal

	Males	Females	Totals
Hospital admission—			
(a) observation	216	221	437
(b) voluntary	46	53	99
(c) temporary	—	—	—
(d) certifiable	58	62	120
Referred to other departments or agencies	6	23	29
No further action necessary	59	90	149
Totals	385	449	834

(c) subsequent disposal of patients admitted to mental hospitals for observation

Disposal	Males	Females	Totals
Voluntary	107	126	233
Certified	47	48	95
Discharged	42	27	69
Died	6	8	14
Pending disposal	14	12	26
Totals	216	221	437

(d) patients admitted direct into mental hospitals

	Males	Females	Totals
Voluntary patients	191	218	409

44 patients (19 males and 25 females) were dealt with on behalf of other local authorities.

In addition to their duties under the Lunacy and Mental Treatment Acts, the duly authorised officers have presented a number of petitions for Orders under the Mental Deficiency Acts in preparation for the time when, after the appointment of the trainees as duly authorised officers, they assume responsibility for the supervision of adult male mental defectives.

Mental Deficiency Acts, 1913-1938

Ascertainment

168 new cases of mental deficiency were ascertained in the year; an increase of 41 over 1955. Of these, 126 were subject to be dealt with under the Acts.

Ascertainment of mental deficiency—

(a) new cases ascertained in 1956

	Education Act, 1944		Other sources		Totals
	Section 57 (3)	Section 57 (5)	Subject to be dealt with	Not subject to be dealt with	
Cases	31	24	20	26	101
Males	21	10	20	16	67
Totals ..	52	34	40	42	168

(b) disposal of mental defectives ascertained in 1956

Method of disposal	Males		Females		Totals
	Under 16	Over 16	Under 16	Over 16	
Mental defectives found subject to be dealt with:—					
admitted to institution	—	3	3	3	9
placed under guardianship	—	—	—	1	1
taken to places of safety	—	—	1	—	1
placed under statutory supervision	41	29	27	14	111
deceased or removed from area	1	1	—	2	4
action not taken by end of year ..	—	—	—	—	—
Mental defectives found not subject to be dealt with:—					
placed under voluntary supervision	—	26	1	15	42
later found not to be defective ..	—	—	—	—	—
deceased or removed from area	—	—	—	—	—
action not taken by end of year ..	—	—	—	—	—
Totals	42	59	32	35	168

Forms of care at 31st December, 1956

Type of care	Number of patients	Percentage of total cases
Statutory supervision.. ..	1,110	44
Voluntary supervision	253	10
In institutions	1,157	46
In places of safety	7	—
Under guardianship	18	—
Totals	2,545	100

Removals from supervision

In all, 81 persons were removed from supervision during the year; 63 were removed from statutory supervision and 18 from voluntary supervision. Reasons for removal are as follows:—

Removal of mental defectives from supervision

Reason for removal	Males		Females		Total
	From statutory supervision	From voluntary supervision	From statutory supervision	From voluntary supervision	
Capable of managing themselves and their affairs	3	—	4	4	11
Notification under Section 57 of the Education Act, 1944, cancelled	1	—	—	—	1
Transferred to voluntary-statutory supervision	—	1	—	1	2
Transferred to other authorities	5	—	9	1	15
Lost sight of	—	4	2	4	10
Died	2	—	3	—	5
Other causes	16	3	18	—	37
Totals	27	8	36	10	81

Guardianship

One additional case was placed under guardianship through the good offices of the Guardianship Society, and two patients were transferred from institutional care to guardianship. One youth proved unsuitable for guardianship and was admitted to a mental deficiency hospital, bringing the total number of cases under guardianship to 18.

Occupation centres

Occupation centres at Ancoats, Victoria Park and Wythenshawe are in operation and, in November, 1956, work was commenced on the Blackley Occupation Centre which will draw its pupils from north Manchester. This will be the first occupation centre in Manchester which has been specially designed and built for this function; it will provide accommodation for 64 day pupils, relieving the pressure on the accommodation at the Victoria Park Occupation Centre. The centres have the same holidays as primary schools in the City.

Attendance of mental defectives at occupation centres

Occupation centre	Males		Females		Totals
	Under 16	Over 16	Under 16	Over 16	
Ancoats	12	3	12	5	32
Victoria Park	46	—	36	13	95
Wythenshawe	21	1	19	4	45
Mult Industrial	2	32	—	—	34
Number awaiting vacancies	—	16	—	—	16
Totals	81	52	67	22	222

The average attendance was 78 per cent.

In addition, 6 Manchester pupils attend the Manchester and District School for Jewish Handicapped Children, daily.

With the co-operation of the School Meals Service, mid-day meals are supplied to the pupils at a cost of 6d. each per meal and, despite the rise in the cost of school meals, the Sub-committee resolved that there should be no increase in the charge to pupils. In cases of financial hardship, meals are provided free of charge. Each pupil under the age of 16 years receives $\frac{1}{2}$ pint of milk free each day and the older pupils have cups of tea.

Five special buses are used to convey pupils to and from the centres, and the children are supervised on the buses by seven part-time guides. Prior to April, 1956, this supervision was carried out by the staffs of the occupation centres.

A medical examination of all pupils was carried out, and this year one pupil only was referred to his family medical practitioner; 66 were referred to the Dental Hospital and 18 to the Manchester Royal Eye Hospital for examination and possible treatment.

In June, 1956, a party of 30 pupils with 4 supervisory staff spent an enjoyable week at the National Association for Mental Health home at Rhyl. Each centre had its open day for parents and friends and, at the Victoria Park Occupation Centre, the event was combined with the annual Rose Queen Festival.

A visit was paid to the Victoria Park Occupation Centre and the Adult Industrial Centre by the Minister of Health on 4th September, 1956.

In keeping with its policy for the development of the occupation centre system, the Mental Health Sub-committee gave instructions for sites to be found for new centres to replace the rented premises in use in Ancoats and Wythenshawe. A site has been selected and approved for the Wythenshawe Occupation Centre, but it has not yet been possible for a site to be allotted to the development plan for the Ancoats area of the City.

Adult Industrial Centre

The work of this centre, catering for male mental defectives aged 16 years and over, is proving invaluable in the training of adults. The centre, because of lack of space, is limited to two classes, one for general handicrafts such as basketry, leather-work, wicker-work, pottery and glass decoration, rug making and stool making, and the other for woodwork. Woodworking machine installed at the centre consists of a band-saw, a planing machine, a fret-work machine and orbital sanders. Many useful articles have been produced such as step-ladders, clothes maidens, book-racks, stool frames, paper racks and bedside cabinets. Wooden toys from the occupation centres and day nurseries are repaired, and wooden cases for acid bottles, trays for smaller bottles and seed boxes for other Corporation departments have been made to order. Special attention has been paid to the breaking down of the stages of manufacture and extensive use has been made of specially designed jigs. By this means even the lowest grade of pupil can share satisfactorily in the work of the centre, and every effort is made to change pupils over from job to job to give added interest.

During the year two pupils were placed successfully in employment.

An unsuccessful search has been made for suitable premises to convert into an adult centre for 100 male pupils. In December, 1956, the Mental Health Sub-committee therefore approved in principle that a site be found for a specially designed building.

Education and visits of students

In January, 1956, the joint Ministry of Health and Ministry of Labour and National Service exhibition on Mental and Mental Deficiency Nursing was held in the Large Hall of the Town Hall. One stand was devoted to the work of the Mental Health Service and aroused a great deal of interest from members of the public, for whom the work of a local health authority in the mental health field had hitherto been a closed book.

Considerable work was done during the year in introducing social workers from other fields to this branch of the service. Students who received practical training in the Mental Health Service included two social science students and a post-graduate social science student from Manchester University, two social science students from University College, Swansea, and 30 student health visitors. In addition, numerous requests from interested persons wishing to see the work of the occupation centres have been acceded to. Such periods of training and visits are to be encouraged as they are an indication of a growing public interest in mental health work.



HEALTH EDUCATION

Measures to bring health education to the attention of the general public are continued as in the past years, principally through personal contact made with people by the field workers of the public health team—the medical officers, health visitors, midwives, mental health workers and public health inspectors.

Health visitors and public health inspectors are, by reason of their duties, able to enter the homes of members of the community and, also, to meet them at the City's clinics and child welfare centres, where on personal contact they are able to advise and assist generally in promoting a better understanding on matters of hygiene and health problems and, ultimately, better health.

Evening public lectures by medical and nursing staff on health topics also continued to be given, and the Department co-operated with organizations interested in matters of health education of benefit to the public.

The monthly magazine "Better Health" was distributed to the public, mainly through child welfare centres and school health clinics. A total of 2,000 copies were distributed each month; also departmental publications "Infectious Diseases," "The Family Welfare Service" and "The Health Services of the City" were issued in addition to a large number of pamphlets published by the Central Council for Health Education and the Royal Society for the Prevention of Accidents.

The value of immunization against diphtheria and the facilities available, have continued to be stressed by means of posters and advertisements in the programmes and handbooks published in connection with the Wythenshawe Civic Week and the Roman Catholic and Church of England Whit Week processions. Numerous enquiries were made by students who were studying and interested in the health services administered by the City Council, either personally or by correspondence.

The following is a summary of the educational work in connection with the child welfare centres and the Health Department generally:—

- (1) Lectures were given to social and business organizations by members of the health visiting and sanitary services staff as follows:—12 to Old People's Clubs; 6 to Women's Co-operative Guilds; 2 to the Young Wives' Club; 4 to the Mothers' Union; 7 to the District Nursing Association; 3 to the Gorton Boy Scout Association and one each to the Old Age Pensioners' Association, Ladies Community Centre, Nursery Training College, Institute of Fuel, Sanitary Inspectors Association, Incorporated Society of Auctioneers and Landed Property Agents, the staffs of Pauldens Ltd., Savilles Ltd., and Duncan and Foster Ltd., and a group of students from Manchester University. The value of lectures to the general public stimulates a keen interest in the activities of the service or subject under discussion and frequently results in the members of the audience taking up voluntary social work of some kind in which their interest has been aroused.

Three courses of lectures on mothercraft were given to women with young children, in H.M. Prison for child neglect.

Lectures and practical experience were arranged for student nurses of local hospitals; 353 students attended one lecture on the social aspects of disease; 221 students attended a lecture on the work of the public health nurse; 221 spent a half-day on the district with health visitors; 78 observed the work of an infant clinic at a child welfare centre. It is felt that the contact between student nurses in hospital and public health nurses in the preventive field can be of great value in linking the preventive and curative aspects of disease, in the minds of the students during their hospital training and gives better opportunities for them to become aware of the different types of work which will be open to them in the future. They are given a general impression of the health visitors'

main duties in health education, to encourage and promote full health of mind and body within the family group; they have an excellent opportunity to note the value of co-operation with other social workers, and a brief insight into the value of family casework in the socially inadequate families, and the importance of early preventive measures in this work. This experience is brought about by lectures on the social aspects of disease, followed at a later date by home visits with the health visitor where they see the problems to be dealt with, and learn from actual experience the value of prevention or early detection followed by the appropriate action which is taken. This experience illustrates the value of preventive work, and the influence this may have on the future welfare of the families concerned.

- (d) Visits of observation to child welfare centres were made by nursery assistants in 59 instances and by child care reserve students in 24 instances.
- (e) Students from the Department of Child Health, St. Mary's Hospitals, made 71 visits of observation to day nurseries and infant clinics at child welfare centres.
- (f) Six medical practitioners studying for the Diploma in Child Health attended a total of 42 sessions at child welfare centres.
- (g) A visit of observation was made to an infant clinic at a child welfare centre by a group of 16 students from the Princess Christian College.
- (h) The work of the Department was discussed with a group of seven students in social administration (Manchester University), six of whom later spent a half-day each week for seven weeks at a child welfare centre; one student spent a day each week for six weeks with the welfare officers for unmarried mothers.
- (i) Visits to the Department and departmental establishments were made by one World Health Organization student from New Zealand and one Social Worker from Denmark.
- (j) Groups of pupils from Manchester High School and North Manchester High School for Girls were given lectures on slum clearance, air pollution, food hygiene and environmental hygiene.

AMBULANCE AND TRANSPORT SERVICE

Ambulance Service

Introduction

The demand for ambulance transport continued to increase during 1956, particularly in connection with the conveyance of out-patients. This increased demand resulted in a 4.6 per cent. increase in the total number of patients carried, with an increase of 1.7 per cent. in the total mileage of the ambulance fleet.

In order to cater for the increased demand, the ambulance fleet was enlarged during the year by the addition of two dual-purpose vehicles. These vehicles were put into operation at two hospitals where the demand for out-patient transport was high, and helped to reduce delay in out-patient removals. In addition, two two-stretcher ambulances were converted into dual-purpose vehicles and two diesel-engined dual-purpose vehicles were authorised to be purchased as replacements for two sitting-case cars.

At the 31st December, 1956, the ambulance fleet consisted of the following vehicles:—

51 2/4 stretcher ambulances
13 dual-purpose vehicles
2 sitting-case cars.

Operational record

	1955	1956
Number of journeys	98,976	89,144
Patients removed	192,580	201,385
Total mileage	898,306	913,166*
Mileage outside Manchester (non-Manchester patients)	22,624	11,663

Analysis of removals

	1955	1956
Accidents	9,639	10,278
Infectious	11,068	4,471
General	171,873	186,636
	<u>192,580</u>	<u>201,385</u>

* Includes 9,840 miles in respect of pool cars utilized in ambulance service.

Rail journeys

The policy of arranging the transport of patients by rail in appropriate cases has been continued, and 291 such journeys were arranged. Ambulance service transport is provided to convey the patients to and from the railway stations, and full and effective co-operation is given by British Railways in ensuring the comfort of the patients during the railway journeys.

Radio control

Towards the end of the year radio control of a number of ambulances was introduced for an experimental period, and the immediate results of this experiment were very encouraging. During the first month of operating radio control, the mileage per patient showed a decrease which, if maintained, should result in reducing the total cost of the service. At the same time the efficiency of the service has been maintained, and in some instances has been enhanced due to the constant contact which has been able to be maintained with the radio equipped vehicles.

Staff

The number of authorized operational staff has remained constant throughout the year, and when vacancies have arisen no difficulty has been experienced in obtaining suitable applicants.

First aid training has continued, and of the 147 operational staff, 141 have qualified or re-qualified during the last three years.

Ambulance drivers, together with other drivers employed in the Health Department, were again entered in the National Safe Driving Competition in order to help in maintaining the high standard of driving expected from the staff of the Ambulance Service; of the 78 entries, 64 qualified for awards, leaving the service during the course of the year.

Hospital Car Service

The transport of walking cases to and from out-patient clinics and convalescent homes has been augmented by the use of hospital car service volunteers; the work carried out by the 17 drivers normally available was as follows:—

	1955	1956
Journeys	5,751	4,129
Patients	17,395	16,876
Mileage	140,712	124,464

Civil Defence

The new standard training syllabus for the Ambulance and Casualty Collecting Section, which was issued by the Home Office at the end of 1955 was used at the commencement of training in January, 1956. The course of theoretical and practical work and exercises covers a period of approximately 26 weeks. During the year 66 volunteers completed the standard course and commenced more advanced training in first aid, casualty handling, ambulance loading and other items of training applicable to the section.

Three full first aid courses were completed. 29 volunteers finished a course passed the examination and were awarded certificates.

In addition to the three training centres enumerated in the last report, a fourth class was formed in September, 1956, at the Newall Green Junior School, Firbank Road, Wythenshawe, to cater for volunteers living in the Wythenshawe area, but the response so far has been disappointing.

Driving instruction has been given to volunteers who have completed standard training. 20 volunteers passed the driving test. Trained drivers have been afforded opportunities for driving practice at regular monthly intervals and have visited hospitals in Manchester and some surrounding districts.

Several out-door small-scale exercises were arranged in co-operation with the Rescue Service, at the latter's training ground in High Street, Chorlton-on-Medlock, to test the volunteers in practical first-aid and casualty handling. These exercises are popular with the volunteers.

A team was entered in and trained for the Regional Tourney at Blackpool on 22nd and 23rd September, 1956.

Approximately 50 volunteers from the Section attended a large-scale exercise on Sunday, 7th October, 1956, on St. George's clearance area in Hulme. This exercise was arranged to provide an opportunity for personnel to put into practice the theoretical training which they had received.

Assistance was rendered to the Manchester Regional Hospital Board by the provision of personnel and ambulances in connection with their annual mobile first-aid unit competition.

A course for volunteers who desire to qualify as Section instructors in accordance with the new training syllabus was commenced in October and due to be completed in March, 1957. Ten volunteers are taking this course.

Municipal Car Pool

During the year three pre-war limousine cars were replaced by three saloon cars, and the car pool now consists of two limousine cars and six saloon cars which are used by various committees and officials of the Corporation. The operating mileage for the year was 71,529, compared with 68,039 in the preceding year.

Commercial vehicles

Two vans and one lorry were operated on Health Committee functions. The mileage run by these vehicles was 15,674, including 11,173 on the Disinfection Service.

Immunization Unit

The mobile immunization unit continued to operate and provided facilities for the immunization against diphtheria of children whose parents could not bring them to child welfare centres. In addition, special visits were made to those areas where the percentage of immunized pre-school age children was low. This vehicle, which is a converted single-deck omnibus, operates from the Monsall Sub-depot and its mileage in 1956 was 9,500.

Disinfection Service

A disinfection station forms part of the Monsall Sub-depot and two steam disinfectors are used for the disinfection of clothing and bedding. In addition, a formalin chamber is used for articles which cannot be subjected to the steam process. One of the commercial vehicles is utilized as a bedding van for the collection of infected bedding, clothing, etc., and has been designed so as to ensure that complete disinfection of the interior can be carried out before being put into service for the return of disinfected articles. The disinfection of 30,748 articles was carried out, this total consisting of the following:—

Blankets	1,196
Sheets	160
Pillows	597
Bolsters	4
Quilts	3
Mattresses	357
Beds	17
Articles of clothing	10,073
Library books.. .. .	922
Bales of cotton waste	1,147
Articles of second-hand clothing for export	11,015
Miscellaneous	5,257
	<u>30,748</u>

Clinic

A clinic for the treatment of persons suffering from scabies and verminous conditions is situated at Monsall Sub-depot, and the following figures show the number of treatments given:—

Scabies	454
Verminous conditions	413
School-children	452

Operating mileage

The total mileage operated by the various sections of the Ambulance and Transport Service during 1956 was as follows:—

Ambulance Service	913,166
Municipal Car Pool	71,529
Commercial vehicles	4,501
Bedding van	11,173
Immunization unit	9,500
	<u>1,009,869</u>

LANGHO COLONY FOR EPILEPTICS

STAFF:

G. A. Thompson, M.R.C.S.(ENG.), L.R.C.P.(LONDON) . . . Medical Superintendent.

Miss E. J. Smith, S.R.N., R.M.N., R.M.P.A. Matron.

S. A. C. Bunn, F.C.C.S., A.H.A. Secretary-Steward.

On the 31st December, 1956, there were maintained in the Colony 257 male and 261 female residents, of whom 194 were chargeable to the Manchester Corporation, and 324 to other Authorities, as under:—

County Boroughs	County Councils
Barrow-in-Furness 1	Cheshire 3
Bath 1	Durham 5
Birkenhead 2	Glamorgan 3
Birmingham 7	Hertfordshire 1
Blackburn 26	Lancashire 129
Blackpool 11	Middlesex 7
Bolton 4	Monmouthshire 1
Bootle 2	Northamptonshire 1
Bradford 4	Salop 1
Brighton 1	East Suffolk 4
Bristol 1	Surrey 7
Burnley 11	Worcestershire 1
Croydon 2	Yorkshire, North Riding .. 2
Dewsbury 2	Yorkshire, West Riding .. 11
Edinburgh 1	
Leeds 8	
Liverpool 17	
Newcastle-on-Tyne 2	
Oldham 6	
Preston 7	
Rochdale 2	
Salford 20	
Southampton 1	
Southport 2	
St. Helens 1	
Stockport 1	
Wallasey 1	
Warrington 1	
Wigan 2	
	Ministries
	Ministry of Pensions and
	National Insurance
	(Manchester) 1

Total: 324

The total number of epileptic seizures during the year was 19,387

	Severe	Slight	Total	Average	Numbers of residents maintained
Male ..	6,252	6,034	12,286	52	257
Female ..	3,520	3,581	7,101	27	261
Totals ..	9,772	9,615	19,387	—	518

The classification of the incidence of seizures during the year is as follows:—

	Males	Females
Status epilepticus	—	—
Increased incidence	46	19
Decreased incidence	68	121
No change	100	83
No seizures during the year	62	75

There were:—

	Males	Females	Totals
Admissions	32	14	46
Re-admissions	11	4	15
Discharges	50	17	67
Deaths	14	13	27

Treatment at hospitals and clinics:

	Males	Females
Blackburn Royal Infirmary Clinic:—		
Dental Department	1	—
Ear, Eye, Nose and Throat Department	1	4
Fracture Department	33	18
Gynaecology Department	—	6
Medical Department	8	10
Orthopaedic Department	11	3
Light Therapy Department	5	3
Physiotherapy Department	6	3
Radiotherapy Department	1	3
X-Ray Department	11	10
Skin Department	14	8
Surgical Department	7	5
Surgical Appliances and Garments	13	2
Transfers—for examination and treatment:—		
Accrington Victoria Hospital (Eye)	2	1
" " " (Fracture)	3	2
" " " (Medical)	5	2
" " " (Orthopaedic)	1	—
" " " (Surgical)	1	—
" " " (X-Ray)	1	—
Artificial Limb Fitting Centre, Manchester	—	1
Chest Clinic, Duke Street, Blackburn	2	3
Manchester Eye Hospital	—	2
Manchester Royal Infirmary (Asthma Clinic)	1	—
" " " (Surgical Appliances)	2	1
Preston Royal Infirmary (Eye Clinic)	6	4
" " " (Orthopaedic)	1	—
" " " (Plastic Surgery)	5	—
Wythenshawe Hospital (Plastic Unit), Manchester	1	—
Transfers—for operative treatment:—		
Accrington Victoria Hospital	3	1
Blackburn Royal Infirmary	7	10
Chest Clinic, Duke Street, Blackburn	2	2
Park Lee Hospital, Blackburn	—	2
Queen's Park Hospital, Blackburn	2	3
Wythenshawe Hospital (Plastic Surgery)	3	—
Transfers—for observation:—		
Birch Hill Hospital, Rochdale	—	1
Whittingham Hospital, near Preston	2	—

The employment of residents on 31st December, 1956, was as follows:—

	Males	Females
Assembly Hall duties..	3	—
Domestic—administrative block, etc.	11	12
Domestic—general kitchen	—	10
Domestic—the homes, etc.	85	91
Elderly, infirm, sick and unemployable.. . . .	43	79
Engineers' department	3	—
Farms	12	—
Grounds and coal-yard	46	—
Kitchen gardens	5	—
Laundry	2	22
Light duties in the homes	15	—
Occupational therapy department	22	27
Office and general stores	5	—
Sewing room	—	20
Shoemakers' department	4	—
Tailors' department	1	—
Totals	257	261

The big event of the year as far as the Colony was concerned was the Jubilee Celebration. On the 3rd of September, 1956 the Colony was 50 years old; 50 years of helping those afflicted with epilepsy, and so filling a very necessary niche in the welfare structure of the community.

In August, 1897, the members of the Chorlton and Manchester Joint Asylum Committee appointed their Chairman, Dr. John Milson Rhodes, M.D., and Alderman A. McDougall, J.P., to visit such institutions for the treatment of epileptics in Germany, France and Belgium, as they might deem desirable, for the purpose of collecting information with regard to the care and treatment of such cases, in the afore-mentioned countries. As a result of that report, the present Colony was founded by the Board, and the foundation stone was laid by Dr. J. M. Rhodes (their Chairman) on the 25th October, 1904. The Colony itself was opened on the 3rd September, 1906, by the Rt. Hon. The Earl of Derby, K.C., C.C.B. In passing, it is interesting to note from one of the original books about the Colony that the salary of a male attendant in those far-off days was £26 per annum, and a laundrymaid received £18 per annum. In 1930, the Colony came under the jurisdiction of the City Council and has so remained to this day. It is the largest epileptic colony owned by a local authority in the country, and most certainly fills a very pressing need; at present there is a long waiting-list for admission.

Jubilee Celebration events

The Jubilee celebrations were held on Saturday, the 8th September, 1956, when members of the general public, residents' relatives and former residents were invited to attend. A tableaux, depicting life at the Colony during the past 50 years, was presented, together with other entertainments.

On the Tuesday following, the 11th September, 1956 we were honoured by a visit from the Minister of Health, Mr. R. H. Turton, M.C., M.P., together with the Lord Mayor, Lady Mayoress, the Chairman and members of the Health Committee of Manchester Corporation, accompanied by officials. After inspecting the Colony, trees were planted by the Minister and members of the Committee to commemorate the Anniversary.

Official visits to the Colony

The Colony was officially visited by members of the Welfare Services Committees of the following County Borough Councils:—

Blackburn, Bolton, Dewsbury, Rochdale, Salford, St. Helens and Warrington. They all expressed appreciation of the work that is being done here and the care and attention given to the residents.

The Official Solicitor to the Supreme Court, London, visited the Colony on the 10th October, 1956 and interviewed two of the residents who are under the Court's jurisdiction. She expressed herself well pleased with the care and attention they received.

In December, 1956, Lady W. H. Hamilton, the Regional Administrator for the Women's Voluntary Service for Civil Defence, in company with her assistant, Mrs. J. Brander, visited the Colony with a view to investigating the possibility of the W.V.S. providing services here.

Hospital omnibus

In May, 1956, a 21-seater 'bus was obtained for the use of the Colony residents and staff; to convey the old and infirm male and female residents on weekly outings, and to take the Colony cricket and football teams to their away matches, as well as being utilised by the staff at the weekends when the public 'bus service is inadequate.

Entertainments

The usual entertainments were enjoyed by the residents and included weekly dances, pictures and monthly concerts, etc. A successful Sports Day was held on Saturday, the 7th July, 1956 when we had the pleasure of welcoming the members of the Health Committee and Corporation officials. The prizes were again kindly presented by Councillor J. Conway (Chairman of the Health Committee and of the Residential Homes Sub-Committee). The cricket team had another enjoyable season in Division 1 of the North-East Lancashire League, and the Colony football team has now joined the Manchester Regional Hospital Patients' Football League; this has given great pleasure to the residents who look forward to the matches with the various nearby institutions. Blackburn 'A' team played a number of their home matches on our ground, and these have been especially interesting when the games have been between Blackburn and one of the Manchester City or United teams, as well as local 'Derby's' against Bolton, Burnley and Preston.

The usual annual outings to Blackpool, and a very full Christmas programme were again enjoyed by all the residents.

General remarks

Throughout the year, the health of the residents has remained good, and there have been no epidemics of any kind. The usual high standard of farming has been maintained under the supervision of the Farm Bailiff.

I would again like to thank the Matron, Secretary-Steward, Head Male Attendant and all other members of the staff for the support that they have given me during the past twelve months, and in conclusion, I would also like to thank the members of the Residential Homes Sub-Committee for their unflinching courtesy.

DR. GARRETT MEMORIAL HOME

The Home, which contains 130 effective beds, affords recuperative sea-side convalescence for Manchester children between the ages of two and 15 years usually for a period of six weeks.

The sources from which children are referred to the Home are the School Medical Services, Maternity and Child Welfare centres, City hospitals and general medical practitioners. The majority of those admitted suffer from general and/or nervous debility, some form of disease of the respiratory system or anaemia.

Twenty-two children are conveyed between Manchester and the Home in Conway, North Wales, by chartered omnibus once each week.

Admissions numbered 987 compared with 973 in 1955. Of the 985 children discharged, 806 were recorded as "fit," 176 as "improved," and 3 as "requiring further hospital treatment"; 982 gained weight during their stay, whilst in the cases of the remaining 3 no changes in weight were perceived.

The highest number in residence was 133 and the lowest 82; the average number maintained was 116.6 as compared with 117.41 last year. It is estimated that another 6.5 could be added to the latter figure in respect of children taken home by their parents prior to due discharge date; 394 children were "discharged" in such circumstances, as compared with 374 last year.

There was one instance of a child leaving the Home without permission, as compared with none last year.

It was again a disappointment that we were unable to admit 1,000 children during the year—we failed by 13—due to infection, which caused admissions to be cancelled.

Illness amongst children requiring nursing care in the Home included 11 cases of tonsillitis, sore throats and coryza; 16 cases of rubella; 57 cases of influenza; 29 cases of otitis media; 2 cases of Sonne dysentery; 15 cases of mumps; 2 cases of glandular fever and 22 cases of chicken pox. Three children were transferred to the local Isolation Hospital, suffering from scarlet fever.

The children enjoyed outdoor recreational facilities under the direction of the three wardens to the fullest extent, whenever the weather permitted. At the beginning of autumn the weekly film shows commenced and were a constant source of enjoyment. The projection television set, radiogram and simple handicrafts provided entertainments during inclement weather.

On the 7th April, 1956, Miss M. Selman, Assistant Matron, left to take further training, with a view to going abroad. Miss D. Whittaker commenced duty as Assistant Matron on 4th September, 1956. Endeavours to recruit sister and senior kitchen staffs were unsuccessful.

Buildings and outdoor wooden chalets have been maintained in good condition.

Christmas festivities were enjoyed by everyone and we were very pleased to receive the Mayor and Mayoress of Conway on Christmas morning.

MUNICIPAL HOSTELS

Women's: Ashton House (Corporation Street, Ancoats)

Miss S. J. Bayley, Manageress.

Men's: Walton House (Harrison Street, Ancoats)

Mr. H. Stainton, Manager.

The municipal hostels provide accommodation in separate cubicles for 210 women and 464 men; during 1956 the average nightly occupancy was 157 and 441 respectively, which, against the figures for 1955, show an increase for Ashton House and a slight reduction for Walton House.

Ashton House was erected by the Corporation under the provisions of the Housing of the Working Classes Act, 1890, and was opened in 1910, being named after Miss Margaret Ashton who was a pioneer in social services for women; it is registered as a common lodging-house accommodating 210 persons. Over the years attendances have varied greatly, but recently they have settled down and the present daily average, although not reaching full capacity, compares favourably with the best of previous figures.

The catering section continues to be well patronized, the major portion of the business being conducted through the grocery shop. Cooked meals can be provided but the majority of the residents prefer to cook for themselves; as a result the business done by the canteen is very small.

Improvements carried out during the year have been confined mainly to the residents' kitchen where old gas cookers have been replaced with up-to-date models; in addition, an electrical floor-scrubbing machine and an industrial vacuum cleaner have been purchased for use by the cleaning staff.

Walton House was erected on a site formerly occupied by condemned property in Harrison Street, Ancoats, and opened in 1899 with cubicle accommodation for 363 men; in 1909 it was found necessary to increase the capacity and the building was enlarged, bringing the number of cubicles up to 465. Later alterations, including the provision of a staff dining room, reduced the cubicles to 454 but, in 1952, accommodation was again extended, this time to 464 cubicles. In addition to separate sleeping quarters, the residential amenities consist of smoke room, reading room, dining room, baths, and laundry. Improvements over the past year include the relaying of linoleum on the floors of two corridors and several alterations to the laundry equipment, also the purchase of an industrial vacuum cleaner and an electrical floor-scrubbing machine which have greatly facilitated cleaning processes.

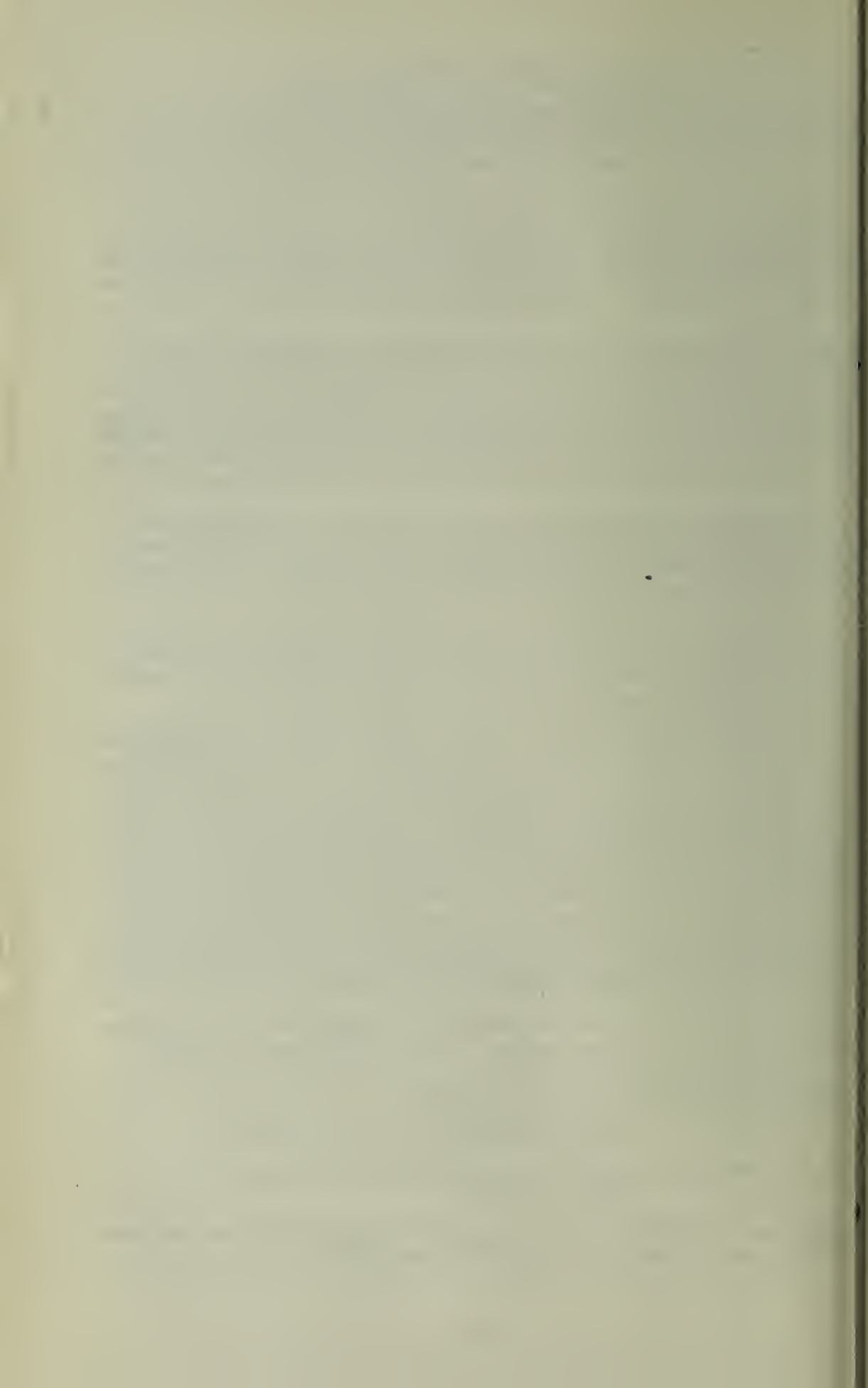
The catering section has again provided the residents with excellent service and the volume of trade has increased in both the shop and the kitchen.

Accommodation charges were as follows:—

Ashton House: Rent of cubicle 3s. a night or 19s. 3d. weekly;
parcels 1d. per week.

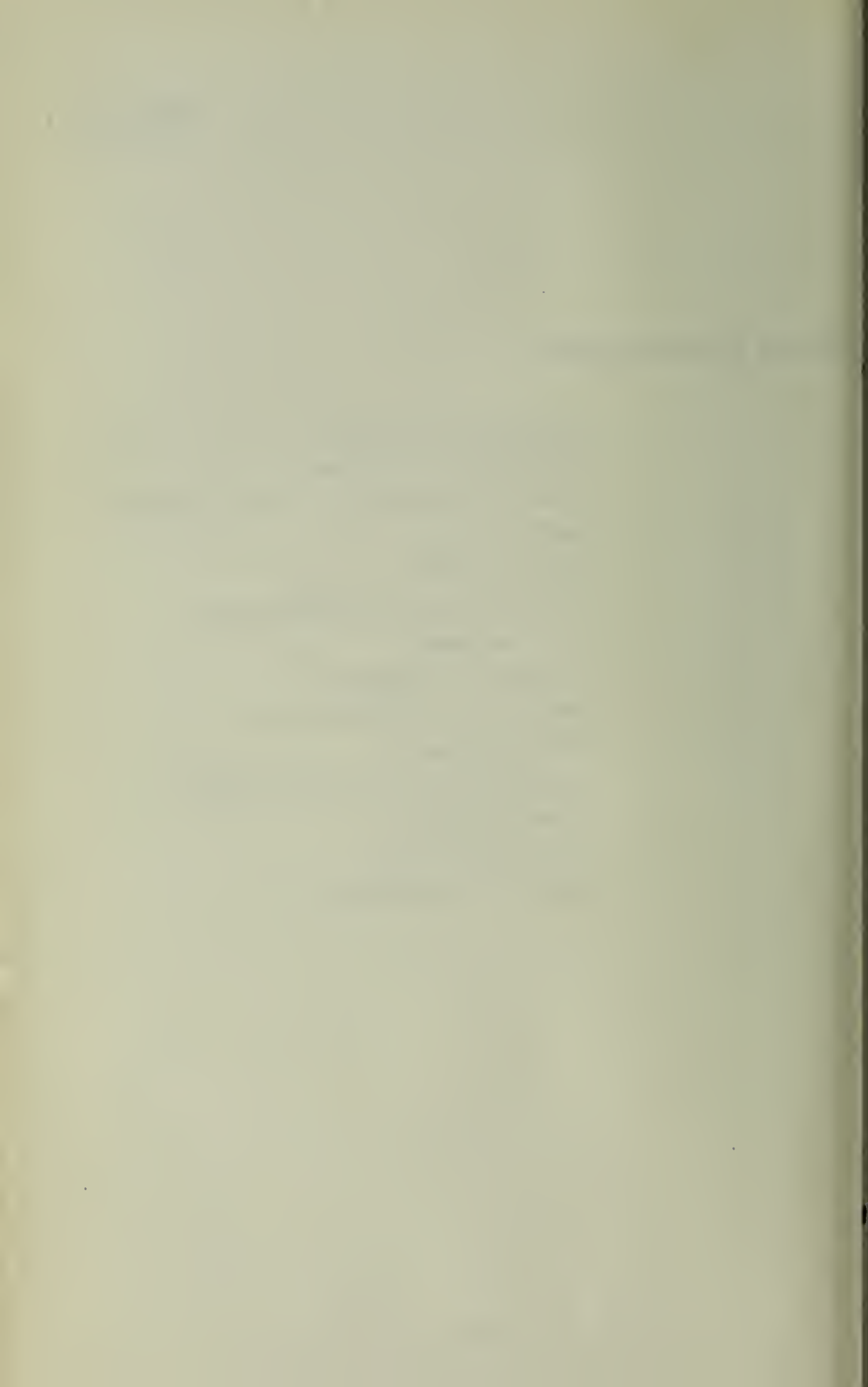
Walton House: Rent of cubicle 3s. 3d. a night or £1 1s. weekly;
parcels 1d. per week.

The rent charges include free use of lockers, baths (with soap and towel provided) and early calling of residents, upon request.



Nursing Services Division

DOMICILIARY MIDWIFERY
INCIDENCE OF BLINDNESS
CARE OF MOTHERS AND YOUNG CHILDREN
DENTAL CARE
HEALTH VISITING
REGISTRATION OF NURSING HOMES
DAY NURSERIES
TUBERCULOSIS SERVICE
EPILEPSY AND CEREBRAL PALSY
HOME NURSING
DARBISHIRE HOUSE HEALTH CENTRE
CONVALESCENCE
HOME HELP SERVICE
FAMILY WELFARE SERVICE



NURSING SERVICES DIVISION

Dr. Alice I. Burke, Senior Medical Officer

STAFF

Medical—

Alice I. Burke, M.B., Ch.B., D.P.H., Senior Medical Officer	}	Medical Officers
*Anthony Denys Bostock, M.B., Ch.B. (resigned 15th September, 1956).....		
Muriel Jane Brayshay, M.B., Ch.B.		
Maureen Buckley, M.B., Ch.B., B.A.O., L.M.		
Annie Margaret Dawson, B.Sc., M.B., Ch.B., D.C.H., D.O.		
Harold Diggles, M.B., Ch.B.		
Florence Maud Duckworth, M.B., Ch.B.		
Joyce Kathleen Howarth, M.B., Ch.B., D.C.H.		
Rosaline Howat, M.B., Ch.B.		
Gwendoline Mary Elsie Keevil, M.B., B.S., D.C.H.		
William Lees, M.B., Ch.B., M.R.C.S., L.R.C.P., D.Obst., R.C.O.G.		
Lydia McMurdo, M.R.C.S., L.R.C.P.		
Joyce Elizabeth Anne Ovens, L.R.C.P. & S.(Eng.), D.Obst., R.C.O.G. (appointed 27th August, 1956)		
Rachel Daphne Rebecca Sasieni, M.B., Ch.B., D.Obst., R.C.O.G. (appointed 1st March, 1956)		
*Henry Roy Simpson, M.B., Ch.B., D.Obst., R.C.O.G.		
Dorothy Elizabeth Margaret Thomas, M.B., Ch.B., D.Obst., R.C.O.G.		

Nursing—

Eileen A. Lamb, S.R.N., S.C.M., M.T, DIPLOMA—Non-medical Supervisor of Midwives.
Evelyn L. Gowing, S.R.N., S.C.M., H.V. CERTIFICATE—Superintendent of Health Visitors.

Lay—

Charles A. Hay, M.B.E.—Chief Administrative Assistant.

* Joint appointment with Education Committee.

DOMICILIARY MIDWIFERY SERVICE

Staff

The staff establishment of domiciliary midwives comprises a non-medical supervisor and 2 assistants, 67 midwives and 3 premature baby nurses.

There are also 11 domiciliary midwives in St. Mary's Hospital Extern Service and 3 midwives in the Service of the Manchester District Nursing Institution. These two bodies employ midwives on an agency basis on behalf of the City Council.

Notification of intention to practise

During the year 1956, 263 midwives notified their intention to practise in the City.

Sources of notices of intention to practise

Municipal midwives	Employed on an agency basis	Independent midwives	Private maternity nurses	Institutions	Total
63	18	2	4	176	263

This number compares with a total of 276 in 1955.

Supervision of midwives

The following visits were paid by the supervisors of midwives:—

Routine inspection visits to midwives	166
Nursings and deliveries supervised	236
Visits to ante-natal clinics	48
Special visits to midwives (sickness, etc.)	92
Investigations, stillbirths, pyrexia, etc.	130
Visits to hospitals and nursing homes	45
Visits to Court	2
Lectures given	5
Lectures attended	9

Training of midwives

The City Council participates jointly with St. Mary's Hospital in a scheme for training pupil midwives. 26 municipal midwives and 2 midwives of St. Mary's Extern Service are approved by the Central Midwives Board for Part II training.

28 pupils were trained during the year, all of whom were successful in qualifying as midwives.

Post-graduate courses

7 midwives attended the recognised residential courses organised by the Royal College of Midwives and an assistant supervisor attended the course at Bedford College.

Transport

Motor cars are owned by 28 municipal midwives and they are reimbursed for mileage at authorised rates. Midwives without cars are able to obtain transport day and night on application to the Health Committee's Ambulance and Transport Section.

Equipment

All midwives, with the exception of 2 who were within a short period of retirement, were supplied during the year with an "Emotryl" trilene apparatus.

A gas-air apparatus is still supplied to each midwife.

Administration of analgesia

	Doctor not present	Doctor present	Total
Trichloroethylene B.P.	896	148	1,044
Gas-air	1,816	461	2,277

Pethidine was given to 2,063 patients

The Health Committee have approved the purchase of oxygen recussitation apparatus. To commence with, 6 midwives were provided with this apparatus during the year and as good reports have been received it is proposed to extend this service.

The midwives much appreciate the inclusion of a sphygmomanometer and binaural stethoscope in their equipment.

Ante-natal care

Midwives hold clinics at 23 of the municipal welfare centres and at Darbshire House Health Centre, which is administered through the University of Manchester. They made 3,035 attendances for this purpose.

Post-natal care

There is practically no demand for midwives to attend post-natal sessions at the centres. Only 7 such attendances were made last year. This is due to the fact that most mothers now attend their own general practitioner.

Deliveries

The total number of births in the City during 1956 was 13,746, of which 4,662 were home confinements. This is an increase of 287 over the number of domiciliary confinements undertaken in 1955.

Attendances at domiciliary births

Municipal midwives		Queen's district midwives		St. Mary's* district midwives	Independent midwives	Total
Doctor not present	Doctor present	Doctor not present	Doctor present			
56 3,176	760	106	9	611	—	4,662
55 2,954	661	103	6	633	17	4,375

* St. Mary's district midwives participate in the domiciliary training of medical students. The patients own doctor is not therefore involved.

This gives a percentage of those confined at home of 33·9.

The percentages of previous years are as follows:—

1955	..	..	..	..	..	33·0
1954	..	..	..	..	..	34·3
1953	..	..	..	..	..	38·4

There were 4,766 applications for the services of municipal midwives and of these 803 were cancelled for various reasons.

This figure includes patients transferred to hospital during labour.

Visits paid by midwives are as follows:—

Nursing visits	68,671
Visits to patients discharged from hospital before the 14th day	3,209
Investigation of homes regarding their suitability for a domiciliary confinement	845
Ante-natal visits to patients' homes	10,075
Abortions attended and nursed	50

The average number of cases per annum attended by domiciliary midwives employed direct or under agency arrangements with the City Council is as follows:—

Municipal midwives	80·2
St. Mary's district midwives	61·1
Queen's district midwives	38·3

An outstanding feature of the year was the unusually large number of emergency cases which the midwives attended.

While some of these calls referred to women who had arranged for admission to hospital and had left it too late, the majority were to patients who had made no arrangements for their confinements and consequently had not received any ante-natal care. The total number of emergency calls received was 98.

Emergency Maternity Service

St. Mary's district midwives are responsible for manning the Flying Squad Unit and 106 such calls were answered.

Source of requests for the Flying Squad

Municipal midwives	St. Mary's District	Nursing homes and cases outside the City boundary	Total
49	22	35	106

Municipal midwives are authorised in an emergency to send for the services of the Flying Squad on their own initiative.

Medical aid

There were 1,675 requests for medical aid in accordance with the rules of the Central Midwives Board.

Of these 205 were by midwives in maternity homes having no resident medical officer. Where medical aid was requested at domiciliary confinements, in 1,060 cases a doctor had been booked while in 410 cases a midwife only was engaged.

Artificial feeding

Notifications of recourse to artificial feeding was received in 671 instances—170 from domiciliary midwives and 501 from institutions.

Pemphigus neonatorum

5 cases of pemphigus neonatorum were notified during the year. One of these cases was in the practice of a municipal midwife, while the other cases occurred in a nursing home. These nursing home cases related to one outbreak and energetic measures were put into operation at once, with the satisfactory result that no further cases occurred.

Puerperal pyrexia

394 cases of puerperal pyrexia were notified under the Pyrexia Regulations of 1951, the rate per 1,000 total births being 22·06. The rate for 1955 was 37·18. There were no deaths among cases so notified. The incidence of pyrexia is shown on the following table:—

Incidence of pyrexia

	Municipal midwives	Midwives acting as maternity nurses	St. Mary's district midwives	Queen's midwives	Institutions	General practitioners -no nursing attendance	Totals
A. (1) Infection of genital tract	9	1	14	—	55	—	79
(2) Abortions	—	—	—	—	1	3	4
B. Extra-genital causes . .	7	3	6	—	68	—	84
C. Unclassified	7	4	5	—	211	—	227
Totals	23	8	25	—	335	3	394

319 abortions occurred which were transferred to hospital but were not notifiable under the pyrexia regulations. This compares favourably with 386 cases in the previous year.

Maternal deaths

There were 3 deaths during 1956 which were directly attributable to childbirth, one of which took place outside the City but whose home address was in Manchester. 6 other deaths occurred which were associated with childbirth.

The maternal mortality rate was 0.24 as compared with 0.75 in 1955.

The 3 deaths which occurred were due to the following causes:—

1. 1 (a) Renal failure. Jaundice.
 (b) Endometritis and uterine abscess.
 (c) Abortion.
 (d) Death from misadventure. Inquest held.
2. Obstetric shock (this death occurred outside Manchester).
3. 1 (a) Uræmia.
 (b) Chronic nephritis.
 (c) Toxæmia of pregnancy.

In addition there were 3 other deaths in Manchester hospitals, the patients residing outside the City boundary, viz. Bowden, Failsworth and Alkrington.

Stillbirths

There were 380 notified stillbirths, which represents a percentage in relation to total births of 2.76

The respective percentages for previous years were as follows:—

1955	..	..	..	..	..	2.93
1954	..	..	..	..	..	3.63
1953	..	..	..	..	..	2.70

76 stillbirths occurred in domiciliary practice and 304 in institutions.

Premature babies

3 specially trained midwives are employed for the care of premature infants at their own homes.

They were responsible for the care of 452 infants during 1956, paying a total of 4,050 visits.

Neo-natal mortality of premature infants according to birth weights

Weight	Survived	Died	Totals
Under 3 lb.	5	—	5
3 lb.—4 lb.	49	—	49
4 lb.—5 lb.	201	1	202
5 lb. plus	195	1	196
Totals	450	2	452

Cause of death of 2 infants mentioned in the table:—

Birth weight

4 lb.-5 lb. Asphyxia—verdict, misadventure.
5 lb. + Severe gastroenteritis.

Source of reference of premature babies:—

Hospitals	360
Nursing homes	17
Midwives	75
Total	452

When the nurses ceased to attend, 56 babies were entirely breast fed, 43 breast and complementary, while 353 were artificially fed.

A good liaison exists between the paediatricians and the nurses, and frequent visits are paid to the premature baby units, where exchange of information regarding home and social environment and the infants' behaviour whilst in the unit is most valuable.

Cots

Special cots are available for use in the home if required. 21 applications were received during the year.

Premature live and still-births. See facing page.

Ophthalmia neonatorum and other eye conditions

There is an establishment of 3 ophthalmic trained nurses for the care of all eye cases referred to the Department.

The sources of reference of such cases are shown in the accompanying table:—

Analysis of the eye conditions of children over 14 days referred
by the health visitors and child welfare centres

	Brought forward from 1955	New cases	Carried forward to 1956
Conjunctivitis (simple)	9	153	14
Conjunctivitis (purulent)	—	30	—
Lacrimal obstruction	7	88	—
Dacryocystitis	—	10	—
Horbeolum	—	15	—
Corneal nebula	2	—	—
Corneal ulcer	1	—	1
Coloboma	5	—	4
Congenital Cataract	18	7	22
Glioma	4	2	5
Defective vision	20	9	23
Microphthalmos	1	1	2
Nystagmus	9	—	7
Anophthalmos	1	3	4
Buphthalmos	—	1	1
Retrolental fibroplasia	15	—	6
Optic atrophy	2	—	1
Ptosis	—	2	2
Choroid retinitis	1	—	1
Proptosis	1	—	1
Keratitis	—	1	1
Albino	—	2	2
Totals	96	324	97

Premature live and still-births

The following tables give particulars as to the survival of premature infants born alive at home and in nursing homes and hospitals in the City during 1956.

Particulars are also given regarding still-births.

1. Number of premature live births notified (as adjusted by transferred notifications).

(a)	In hospital	641
(b)	At home	235
(c)	In private nursing homes	36
Total		912

2. Number of premature still-births notified (as adjusted by transferred notifications).

(a)	In hospital	138
(b)	At home	41
(c)	In private nursing homes	2
Total		181

Weight at birth	Premature live births															Premature still-births		
	Born in hospital			Born at home and nursed entirely at home			Born at home and transferred to hospital on or before 28th day			Born in nursing home and nursed entirely there			Born in nursing home and transferred to hospital on or before 28th day			Born in hospital	Born at home	Born in nursing home
	Total	Died within 24 hrs. of birth	Survived 28 days	Total	Died within 24 hrs. of birth	Survived 28 days	Total	Died within 24 hrs. of birth	Survived 28 days	Total	Died within 24 hrs. of birth	Survived 28 days	Total	Died within 24 hrs. of birth	Survived 28 days			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(a) 3lb. 4oz. or less (1,500 gms. or less)	70	40	15	24	6	18	10	2	5	2	—	2	1	1	—	62	13	—
(b) Over 3lb. 4oz. up to and including 4lb. 6oz. (1,500–2,000 gms.)	150	17	116	44	—	44	22	4	13	9	—	9	3	1	—	35	14	—
(c) Over 4lb. 6oz. up to and including 4lb. 15oz. (2,000–2,250 gms.)	126	2	118	44	1	43	8	—	8	4	—	4	—	—	—	22	5	1
(d) Over 4lb. 15oz. up to and including 5lb. 8oz. (2,250–2,500 gms.)	285	3	282	76	2	73	6	—	4	17	—	—	—	—	—	19	9	1
Not weighed	10	7	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	641	69	531	189	10	178	46	6	30	32	—	15	4	2	—	138	41	2



26 children with abnormal eyesight attained the age of 5 years and were discharged by the Department and referred to the Senior Medical Officer, School Health Service.

Cases of ophthalmia neonatorum and conjunctivitis in newly born infants and eye defects in older children

	Legitimate	Illegitimate	Totals
Ophthalmia neonatorum—			
(a) Notified by medical practitioners	54	3	57
(b) Notified by Royal Eye Hospital	5	—	5
Conjunctivitis in newly born—reported by midwives			
(a) Own cases.. ..	270	21	291
(b) Discharges from hospital before 14th day ..	30	4	34
Conjunctivitis and other eye defects in children over 14 days			
(a) Reported by medical officers of child welfare centres	73	—	73
(b) Reported by health visitors	206	45	251
Totals.. ..	638	73	711

Place of treatment for cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number of cases attending the Royal Eye Hospital:—			
In-patients	12		
Out-patients	40		
	—	52	
Number of cases attended by own doctor	659		
Total	711		
Corneal infections—			
(a) Under 14 days.. ..	—		
(b) Over 14 days	—		
Swabs—			
Positive	10		
Negative	61		
Total	71		

This is an increase of 4 positive swabs on the previous year.

Summary of cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number discharged as recovered	697
Number discharged with damaged sight	—
Number died from any cause	—
Number removed from district	—
Number still under treatment at end of year	14
Total	711

Number of visits by ophthalmic nurses

(a) primary	711
(b) subsequent	4,765
Total	5,476

INCIDENCE OF BLINDNESS

(National Assistance Acts)

The information contained in Parts A and B of the following statement which is in the form requested by the Minister of Health, has been supplied by the Chief Welfare Officer of the City Council's Welfare Service Department:—

A.—Follow-up of registered blind and partially sighted persons, 1956

(i) Number of cases registered during the year in respect of which section F of Forms B.D.8 recommends:—	Cause of disability			
	Cataract	Glaucoma	Retrolental fibroplasia	Other
(a) No treatment	41	17	2	5
(b) Treatment (medical, surgical or optical)	23	1	—	17
(ii) Number of cases at (i) (b) above which on follow-up action have received treatment..	4	1	—	8

B.—Follow-up of registered partially sighted persons

(i) Number of cases registered as partially sighted during the year 1956 in respect of which Section F of Forms B.D.8 recommends:—	Cause of disability			
	Cataract	Glaucoma	Retrolental fibroplasia	Other
(a) No treatment	23	5	1	3
(b) Treatment (medical, surgical or optical)	15	7	—	3
(ii) Number of cases at (i) (b) above which on follow-up action have received treatment	11	3	—	2
(iii) Number of cases at (ii) above in which:—				
(a) Vision improved	3	—	—	—
(b) Sight restored	—	—	—	—
(c) Treatment continuing at end of year	3	4	—	—

C.—Ophthalmia neonatorum

(i) Total number of cases notified during the year	62
(ii) Number of cases in which—	
(a) Vision lost	Nil
(b) Vision impaired	Nil
(c) Treatment continuing at end of year	Nil

Cases of retrolental fibroplasia among premature infants.. .. .

Cases of congenital cataract

Number blinded by glaucoma who had not received treatment.. .. .

Cases of congenital glaucoma (buphthalmos)

CARE OF MOTHERS AND YOUNG CHILDREN

Welfare centres

The number of centres at the end of the year was the same as at the beginning, namely, 27 municipal and 1 voluntary. Particulars of sessions held and children attending are shown later.

The voluntary centre referred to above is held at the Holy Name School, Norton-on-Medlock. A medical officer, health visitor and centre clerk attend from the Health Department, the remaining staff being provided by the Sisters Charity of St. Vincent de Paul.

There is no change in the unsatisfactory position regarding clinic facilities in the Wythenshawe area. Borrowing power reports have been approved by the City Council in respect of three health centres at Northern Moor, Baguley and Woodhouse Park, but the Minister of Health has intimated that he is unable for the time being to recommend the granting of loan sanctions for the building of the centres at Baguley and Woodhouse Park. The arrangements for the erection of the centre at Northern Moor are proceeding and it is hoped that the actual construction work will commence in 1957.

In the meantime terms have been agreed for the use of a Church hall in the Woodhouse Park district as a maternity and child welfare centre until such time as the proposed health centre at Woodhouse Park is erected. It is expected that sessions will start at the premises early in 1957.

Clinics

Weekly clinics are provided as follows:—

Infants	73
Toddlers	28
Ante-natal	40

Medical officers are in attendance at all sessions except 6 child welfare clinics which are taken by health visitors only and 3 ante-natal clinics where midwives only attend. Post-natal examinations are undertaken at ante-natal clinics.

Physiotherapy

It has not been possible to undertake all the physiotherapy work desirable owing to the difficulty in obtaining qualified physiotherapists. Physiotherapy sessions were held at 17 centres during the year and included remedial exercises for children of 2 to 5 years who have postural defects, minor deformities and other general or local poor muscular tone.

Domestic science classes

Demonstrations and practical instruction in food preparation and food values were given at 8 centres during the year. Sewing classes were held at 10 centres.

Attendances, etc.

Attendances at sessions held during 1956 with comparable figures for 1955 are shown below:—

Infant and toddlers' sessions :—

Number of children on centre registers at—		31st December, 1956	31st December, 1955
Under 1 year		6,495	6,371
1 to 5 years		11,968	11,714
Total		<u>18,463</u>	<u>18,085</u>

Attendances made by children:—

Under 1 year	101,353	98,297
1 to 5 years	40,134	42,224
Total attendances ..	141,487	140,521

Ante-natal sessions :—

Number of new attenders	6,001	5,606
Total number of attenders	7,851	7,604
Number of attendances	32,905	32,263

Post-natal sessions :—

Number of attenders	241	231
Number of attendances	271	332

Physiotherapy sessions :—

Ante-natal exercises—

Number of attendances	1,277	1,355
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Post-natal exercises—

Number of attendances	174	119
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Artificial sunlight treatment :—

Number of attenders—

Children	323	421
Adults	—	3
	323	424

Children attending child welfare centres

Centre	On register, January 1st 1956			New attendances during 1956			On register, January 1st, 1957		
	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years
Abbey Hey	284	191	319	312	30	87	256	234	354
Ancoats	96	57	47	133	18	31	90	42	41
Ardwick	222	176	264	318	47	167	243	201	306
Blackley	138	125	182	122	10	32	91	76	122
Burnage (Duchess of York)	172	161	186	221	14	35	162	141	180
Cheetam	240	134	244	303	34	114	240	161	233
Chorlton-on-Medlock	198	139	237	284	39	122	231	192	257
Chorlton-cum-Hardy	326	224	375	434	34	89	334	233	345
Clayton	179	118	207	241	12	49	202	190	262
Collyhurst	286	190	219	456	35	113	346	246	253
Crumpsall	145	133	140	204	20	110	151	111	206
Didsbury	273	198	371	262	18	75	225	171	314
Gorton	307	183	197	351	31	80	289	199	226
Harpurhey	279	233	302	352	18	84	305	223	304
Higher Blackley	135	132	145	197	8	18	141	140	157
Holy Name	85	49	64	121	17	34	83	49	60
Hulme	175	98	165	207	34	75	156	129	158
Levenshulme	366	233	483	405	24	119	317	278	524
New Moston	209	130	210	242	15	59	216	136	207
Newall Green	331	238	555	382	36	274	258	218	475
Newton Heath	221	158	302	277	21	100	221	210	361
Northenden	233	179	443	313	36	181	248	171	372
Openshaw	322	240	176	410	27	117	326	258	304
Rusholme	357	213	362	509	41	80	409	205	213
Sbarston	254	147	247	346	29	128	247	181	194
Hait Road, Fallowfield	191	113	173	227	24	70	169	132	139
Withington	277	246	425	373	40	82	274	262	402
Darbishire House	154	41	36	294	35	71	265	112	74
Totals 1956	6,395	4,499	7,176	8,296	747	2,536	6,495	4,901	7,667
Totals 1955	5,759	4,001	6,183	8,230	1,147	3,286	6,395	4,490	7,176



A sewing class at a welfare centre



Distribution of welfare foods at a welfare centre

Minor ailments

105 children under five years of age were referred by the medical officers welfare centres to school clinics for the treatment of minor ailments. Children who fail to attend or cease attending before treatment is completed are "followed up" by health visitors who stress the desirability of treatment.

The type of ailment and number of children referred for treatment is shown below.

Number of children referred for treatment of minor ailments

Squint	78
Other eye affections	5
Otorrhoea	2
Other ear affections	4
Impetigo	9
Other skin affections	2
Miscellaneous	5

Welfare foods

National welfare foods and proprietary brands of welfare foods and articles are available at all the maternity and child welfare centres.

Proprietary brands of foods and articles are sold to parents whose children attend the centres regularly and may be purchased on the recommendation of the centre medical officer. Milk foods are supplied free of charge in necessitous cases; the cost to the Corporation of such issues in 1956 was £158 3s. 1d.

National welfare foods are distributed at the maternity and child welfare centres to all persons who produce the necessary vouchers whether or not the children concerned attend the centres. The foods are also issued at 9 other premises in the city, of which 4 are premises from which the general public may obtain supplies, 3 at hospitals for those attending the out-patients department and 2 at large factories for issues to the employees.

Figures showing the issues of national welfare foods to beneficiaries since the Department took over the distribution from the Ministry of Food in June, 1954, are shown below.

Period	National dried milk Tins	Cod liver oil Bottles	"A & D" vitamin tablets Packets	Orange juice Bottles
1954 January to December (6 months)	214,223	48,707	16,734	208,356
1955	384,896	94,638	37,999	468,322
1956	362,936	86,924	38,911	490,787

The figures do not include issues to hospitals, day nurseries or non-maintained nursery schools.

Voluntary workers

Much useful assistance at the centres is given by voluntary workers. 32 ladies made 923 attendances during the year.

"Homecraft" teaching exhibition

This exhibition has a number of sections dealing with the prevention of accidents in the home and out of doors, nutrition, clothing, child health and play therapy.

The exhibition material is used for display and to assist in health education in welfare centres throughout the City. It was also used for demonstration purposes by health visitors giving talks to various organisations on 11 occasions during 1956.

The "homecraft" teaching exhibition is fully displayed at the Refreshment Course for public health nurses held annually by the department, which is attended by a large number of nurses from local authorities in the North West area.

Parts of the exhibition are also utilised by student health visitors during their training course held in Manchester.

Homecraft classes

These classes are held at welfare centres in the Cheetham, Didsbury, Chorlton-cum-Hardy and Withington districts and at "Knowle House" welfare hostel.

The syllabus includes a working knowledge of colour and design, home decoration, rug making, embroidery, handloom weaving, toy making, glove making, leatherwork and lampshades.

Mothers' evening clubs

The evening clubs at Cheetham and Northenden maternity and child welfare centres, which are used for the purpose with the consent of the Health Committee, continued during the year.

Mothers who normally attend the centres meet in the evenings, once fortnight, in a happy social atmosphere. The activities of the clubs are educational and social.

Cheetham club

Club members	57
New members	10
Retiring members	12
Attendances	705
Average attendance	28
Sessions held	25
Talks held	7
Discussions	7
Socials	3
Outings	1
Bring and Buy Sales	2
Parties	2
Harvest Festival	1
Competitions—	
Painting, photography, handicrafts	2

The proceeds of the Harvest Festival were distributed amongst the aged and infirm in the district and donations from the Club have been sent to the Hungarian Relief Fund, the Spastic Society, N.S.P.C.C. and the Family Service Unit.

Visits have been paid by members to the Northenden Club and members from the Salford Clubs have visited the Cheetham Club.

The Club magazine and library have been continued.

Members have benefited by the Club "Family Help Service" and flowers and fruit have been taken to sick members.

In addition to the above, the object and aim of the Club has been to enable the mothers to meet on common ground, where they can relax, have talks on various subjects, cultivate hobbies and in so doing take an interest in themselves, husbands and families, not excluding their neighbours, young and old, and endeavour to make of themselves and families good citizens.

The Club is now approaching its 10th year but the same enthusiasm and interest still continues.

Northenden club

The Club has a membership of 44 and there was an average attendance of 20 at meetings during 1956.

The Mothers' Club, which met 28 times in 1956, continues to be a most useful extra activity at the centre.

Mothers suffering from mental stress due to various causes, e.g. financial difficulties, loneliness after re-housing, lack of outside interests etc. have been persuaded to join the club, and as a result a mental breakdown has been prevented, helped by co-operation with the Family Welfare Service.

The meetings have been varied to suit the tastes of all the members and have consisted of :—

- 10 talks
- 11 social evenings
- 2 discussions
- 1 general meeting
- 1 jumble sale
- 1 coach outing
- 1 theatre party
- 1 musical evening

In 1956 the Club's second annual donation of £5 to a charity was given—this case the N.S.P.C.C.

Talks on the following subjects were given :—

- | | | |
|-------------------------------------|-------|--------------------------------------|
| "How to improve the appearance" | .. .. | Max Factor Beauty Expert. |
| "Holidays" | .. .. | Polytechnic Travel Association. |
| "Home-made sweets" | .. .. | Centre Cookery Teacher. |
| "Family Problems" | .. .. | Psychiatric Social Worker. |
| "Soft Furnishings" | .. .. | Education Department, Craft Teacher. |
| "Some Aspects of the Education Act" | .. .. | H.M. Inspector of Schools. |
| "The uses of Carnation Milk" | .. .. | Carnation Milk Representative. |
| "The work of the N.S.P.C.C." | .. .. | N.S.P.C.C. District Organiser. |
| "Gemmology" | .. .. | By a Jeweller. |
| "Another Social Problem" | .. .. | } Student Health Visitor. |
| "My Country" | .. .. |  |

Nurseries and Child—Minders Regulation Act, 1948

The number of registered child-minders was increased by one during the year, making a total of seven on the register, to care for 80 children.

Accommodation for 60 children is provided at two factory nurseries registered under the Act.

There is also one voluntary nursery for 40 children registered. The maintenance of this nursery is subsidized by the City Council under the provisions of Section 22, National Health Service Act, 1946.

Visits are paid regularly to all registered persons and premises by a medical officer and a health visitor on the staff of the Department.

Care of illegitimate children and their mothers

The health visitor specially appointed for these duties gives advice and assistance and acts as a liaison between the mother, the voluntary organisations and the social services.

During the year the Welfare Officer was assisted by a health visitor and a clinic nurse, both engaged in part-time duties.

The sources of reference of new cases were as follows:—

Health visitors	161
General practitioners	70
Hospital almoners	65
Voluntary	60
Staff of maternity and child welfare centres	50
Moral welfare and social workers.. .. .	38
Children's Department	20
National Assistance Board	10
Welfare Services Department	7
Total	481

The following particulars indicate the extent of the department's activities in connection with special problems concerning married, unmarried women and widows with their illegitimate children, and comparison with the previous year:—

	1956	1955
(1) Office interviews	920	1,250
Home visits	642	698
Visits to hospitals	72	97
Visits to Knowle House	72	90
Visits to other hostels	3	6
Interviews—social workers and health visitors ..	369	700
Attendances at Magistrates' Courts	51	81
Total visits and interviews	2,129	2,942
(2) Health visitors' reports dealt with	2,899	2,820
(3) Number and classification of persons dealt with during the ante-natal period and results of confinement:—		

	Live Births	Births pending	Still-births	Mis-carriages	Total
Single	158	35	6	3	202
Married	24	10	3	—	37
Widow	4	3	—	—	7
Divorcee	1	—	—	—	1
Parents married before birth of baby	—	6	—	—	6
Mother removed	—	9	—	—	9
Totals	187	63	9	3	262

(4) Number of mothers dealt with who had illegitimate children, 724.

(5) Illegitimate children:—

Total number dealt with by Welfare Officer—924, comprising:—

245 children of mothers seen in the post-natal period only.

187 children of mothers seen in the ante-natal period 1956.

51 children of mothers seen in the ante-natal period 1955.

441 children whose cases were re-investigated or carried forward from previous years.

Particulars of illegitimate children remaining with their mothers

Mother	In lodgings or absorbed into family	With mother and putative father	With mother in a hostel	Parents subsequently married	Removed from Manchester	No trace	Deaths	Totals
Single	416	67	7	19	21	24	8	562
Married	95	62	1	—	3	8	1	170
Widow	20	—	—	—	—	1	—	21
Divorcee	10	2	—	2	—	1	—	15
Totals	541	131	8	21	24	34	9	768

Particulars of illegitimate children apart from their mothers

Mother	With adopters	With relatives	With foster mothers	In the care of the Children's Committee	In residential nurseries (private)	Deaths	Totals
Single	47	31	7	25	12	1	123
Married	4	6	2	11	2	—	25
Widow	2	—	—	—	1	—	3
Divorcee	2	—	—	2	1	—	5
Totals	55	37	9	38	16	1	156

The action taken by the Welfare Officer as regards cases referred was as follows:—

Accompanied mother and babies and expectant mothers to hostels and hospitals 126

Admission arranged to—

Knowle House Hostel 131

Voluntary Hostels 4

Ante-natal care arranged 15

Cases referred to—

Children's Department 69

Welfare Services Department 8

Mental Health Service 3

National Assistance Board 32

Catholic Moral Welfare Council 54

Diocesan Council for Moral Welfare 5

Manchester and Salford Methodist Mission 4

National Society for Prevention of Cruelty to Children 5

Police 4

Other organisations 4

Assistance given—

To book a hospital bed	78
To obtain a vacancy in a day nursery	52
To obtain legal advice	12
To find lodgings	6
To secure employment	6
Provision of perambulators and cots—departmental and voluntary services	9
Provision of clothing—departmental sources	36

Advice given regarding—

General matters	187
Adoption	138
Hostel accommodation	133
National Health Insurance Benefits	107
Affiliation orders	105
Day nurseries	81
National Assistance	77
Residential nursery accommodation	17
Institutional accommodation	10

Regular visits were paid to 64 families requiring close supervision.

Affiliation order cases

57 applications for affiliation orders were heard by the Manchester Magistrates' Court and were dealt with as shown:—

Assistance given by	Orders granted
Welfare officer	22
Welfare officer and National Assistance Board	27
Welfare officer and private solicitor	6
Welfare officer and Poor Man's Lawyers Association	2
Total	57

Students

During the year 22 student health visitors and 1 social science student gained experience in this work.

Increased difficulty has been experienced in obtaining hospital beds for unmarried expectant mothers. Many of these women live in furnished rooms, lodgings, hostels or are occupied in residential work, and as a result they usually have to be found accommodation in a hospital or a maternity home for confinement. Unfortunately they rarely make any efforts to book a hospital bed until well advanced in pregnancy, when the hospital beds are fully booked.

The difficult problem of finding hospital accommodation for these expectant mothers at a late stage of pregnancy would be greatly alleviated if they would make an application for assistance at an earlier date.

Mother and Baby Home, "Knowle House," Handforth

Knowle House Hostel, which is administered by the Health Committee, provides accommodation for expectant mothers, mothers with babies and for mothers who require a period of recuperation.

The hostel has accommodation for 22 mothers and 16 babies.

The matron and staff endeavour to instruct the mothers in child care and instil an interest in domestic subjects.

Weekly classes are arranged to teach the mothers various handicrafts, which include knitting, sewing, the making of toys, and leather work; there is an eagerness to learn and considerable pride is taken in the finished articles.

A physiotherapist holds a session once a week for the purpose of giving the mothers ante-natal and post-natal exercises.

The Welfare Officer arranges for the admissions of mothers and babies, accompanies them to the Home, and is responsible for making suitable arrangements for them on their discharge.

The following table shows the admissions and discharges during the year:—

	Carried forward from 1955	Admissions	Discharges	Number in the Home at the end of the year
Babies	9	91	92	8
Mothers	9	77	78	8
Expectant mothers	2	41	41	2
Recuperating mothers ..	—	13	13	—

The following particulars show the arrangements made for the care of the 2 babies discharged:—

Babies remaining with mother—	
In homes of relatives	18
In lodgings	11
In Mayfield House (part III accommodation)	7
In residential employment.. .. .	5
Babies apart from mother—	
In homes of adopters	21
In the care of the Children's Committee	1
In private residential nurseries.. .. .	17
(Most of these babies were admitted to nurseries pending adoption being arranged by a registered adoption society)	
Babies with recuperating mothers	12

Recuperative Centre

By arrangement with the Community Council of Lancashire, mothers and children are admitted to the Brentwood Recuperative Centre, Marple, Cheshire, on recommendations of the Nursing Services Division, the cost of maintenance being borne by the Health Committee. Since 5th July, 1948, provision for these arrangements has been made in the City Council's scheme for prevention of illness, care and after-care under Section 28 of the National Health Service Act, 1946.

Admissions to the Centre during 1956 comprised 11 mothers whose ages were from 26 to 40 years, 6 children under 1 year and 24 children from 1 to 7 years.

One family remained at Brentwood for 6 weeks and one for 5 weeks and the others ranged from 2 weeks to 4 weeks.

The four primary reasons for recommending the mothers for admission to Brentwood are:—

- (1) Lack of training and experience in housewifery and child management.
- (2) Ill-health and lowered vitality, due to too-rapid child-bearing, depressing surroundings and environment and, possibly, in the case of some mothers, malnutrition.
- (3) Unsatisfactory home conditions, including lack of domestic facilities.
- (4) Difficulties between parents, causing the mother to lose interest in her home and children.

There is marked improvement in both the mental and physical condition of the mothers and children after a stay in Brentwood. In most of the cases the mothers look more alert and happy and take more interest in their household tasks, especially in cooking meals. The children benefit greatly from the training given in the Centre, though it is hard to estimate how long this improvement is maintained.

The health visitors follow up the families who have had a period at Brentwood and do all they can to keep them under close supervision to encourage the mothers to improve their standard of living and to teach their children a proper way of life.

Some of these mothers seem to be below normal intelligence, but often the father is work-shy, and is in and out of employment, and does not supply his wife with the necessary regular income which is so essential to a housewife who wishes to maintain a proper home for her family.

DENTAL CARE OF MOTHERS AND YOUNG CHILDREN

(Principal School Dental Officer—G. L. Lindley, L.D.S.)

The work was undertaken by school dental officers working in five school clinics, and by a part-time dental officer working in dental rooms in two of the Committee's centres. General anaesthetics were given by a medical practitioner and trained nurses were available. An oral hygienist working one quarter of her time for the Health Committee, resigned during the year, and it has not been possible to replace her. One full-time dental technician was employed on mechanical dentistry in the laboratory at Shakespeare Street School Clinic.

During the year a comprehensive programme of re-equipping school clinics with modern dental units, lighting, and dental chairs suitable for both young children and mothers was completed. Two dental X-ray units with associated dark rooms for developing dental X-ray films had been supplied, and installed by the end of the year. The five school clinics used were amongst those school clinics modernised in this programme; the two X-ray units were sited at two of these five clinics.

Good progress has been made in the adaptation of the dental clinic at the Rosamund Street centre and this should be in use early in 1957. It has not been possible to provide suitable accommodation in the Cheetham Hill District to replace the room at present in use at the Cheetham Hill Centre. Surgery accommodation is still required in the Wythenshawe area and the north side of the city.

To improve the service, following the re-equipping of the school clinics, a proposal is under consideration for work to be undertaken at all school dental clinics in place of the five at present in use.

Following the pilot scheme of evening dental sessions at the Northenden clinic, evening sessions have been worked at four of the five school clinics used.

It is pleasing to report that, during the year, all cases referred by medical officers were inspected promptly. Almost 100 per cent. of cases referred, both mothers (1,116 out of 1,120), and children (1,635 out of 1,655), were found to require treatment. Urgent treatment was given immediately, and appointments were offered to less urgent cases. Approximately 25 per cent. (663 out of 2,544) of children, and 30 per cent. (837 out of 2,712) of mothers failed to keep these appointments.

The amount of work done during the year shows a slightly reduced demand compared with the previous year. Conservative treatment (221 fillings for mothers, 624 for children) was substantially the same as last year. General anaesthetics given followed a similar pattern. Dentures fabricated increased from 266 to 301. There has, however, been a welcomed decrease in the number of extractions for both mothers, a fall from 3,284 to 2,394, and children, a fall from 1,260 to 984. In the case of children, however, extractions during the polio season were limited to teeth causing pain, or materially affecting the child's health. Despite the decrease in extraction for mothers the ratio to fillings is still very high 2,394 to 221, i.e., 10: 1, and this plus the steady increase every year in the number of dentures fabricated, indicates the poor state of dental hygiene amongst the cases referred, and it is obvious that more Dental Health education is required.

Recruitment of dentists is still a major problem.

The tables below give details of the year's activities and, for comparison, 1955 figures are shown:—

(a) Numbers provided with dental care

		Number referred from child welfare centre	Number examined	Number needing treatment	Number treated	Number made dentally fit	Number of appointments offered	Number of appointments not kept
Expectant and nursing mothers	1956	759	1,120	1,116	1,327	345	2,544	663
	1955	644	967	955	1,402	285	..	..
School children	1956	1,030	1,665	1,635	1,768	707	2,712	837
	1955	1,152	1,812	1,766	2,031	868	..	..

(b) Forms of dental treatment provided

		Extractions	Anaesthetics		Fillings	Crowns	Inlays	Scaling and gum treatment	Silver nitrate	Dressings	Radio-graphs	Other operations	Dentures	
			Local	General									Complete	Partial
Expectant and nursing mothers	1956	2,394	906	146	221	—	—	55	—	23	4	723	199	102
	1955	3,284	715	127	214	—	1	173	—	25	3	637	184	82
School children	1956	984	137	358	642	—	—	10	3,318	37	—	75	—	—
	1955	1,260	247	478	760	—	—	21	3,283	95	—	78	3	1

(c) Work undertaken by the oral hygienist

(Up to March 29th, 1956)

	Number treated	Number of visits	Number completed
Expectant and nursing mothers	31	31	11
Pre-school children	3	3	3

(d) Mechanical dentistry

Dentures completed	301
Retrys	8
Repairs	4
Bites	274
Special trays	11
Models cast.. . . .	351

HEALTH VISITING

Progress in the field of health visiting continues. The field work of the health visitor is embodied in the care of the family as a social unit and she acts as health teacher and family advisor, dealing with the requirements of all age groups.

Following the primary visit to babies from 15 days old, home visitation is selective, the health visitors visiting most frequently those families where the need is considered to be greatest.

Much time is taken up by family casework in connection with those parents unable to manage their home and family satisfactorily. The aim is to prevent a complete breakdown whenever possible.

Loneliness on the new housing estates is an important factor to be dealt with, otherwise young mothers feel frustrated in their strange surroundings and give up trying to manage. On one such estate, a Mothers' Evening Club, held at the Child Welfare Centre, is doing excellent preventive work. (see Club Reports).

In December, 1956, the health visitors had under observation 55,195 children under 5 years of age, compared with 62,910 for the previous year.

Notification of births

The total number of notifications adjusted by transfer was 12,381 comprising 12,050 live births and 331 still-births.

Total registered births numbered 11,967 and of these 915 were illegitimate.

It has been possible in 12,047 (11,806 live births and 241 still-births) representing 99.3 per cent. of the total registered births in the City, to consider the place in the family of each birth, and this is shown in the following tables.

Full-time and premature births have been separated, the standard birth weight of 5½ lbs. or under having been adopted in 1938.

Births investigated during 1956 to show place in family

Place in family	Live births				Live births		Still-births				Still-births		Live and still-births
	Legitimate		Illegitimate		1956		1955		Legitimate		Illegitimate		
	Full time	Pre- mature	Full time	Pre- mature	Per cent.	Per cent.	Full time	Pre- mature	Full time	Pre- mature	Per cent.	Per cent.	
1st	3,414	356	273	45	34.63	32.37	47	35	2	5	36.93	31.11	34.67
2nd	2,921	195	124	26	27.66	27.29	21	19	—	3	17.84	20.00	27.47
3rd	1,644	132	89	6	15.85	17.59	13	19	—	1	13.69	18.10	15.81
4th	991	77	56	6	9.57	10.32	10	15	—	1	10.79	13.33	9.60
5th	527	53	44	9	5.36	5.64	9	11	—	—	8.30	5.40	5.42
6th	292	28	29	—	2.96	3.00	5	—	—	—	2.07	6.03	2.94
7th	188	25	10	2	1.90	1.69	4	7	—	1	4.98	2.54	1.96
8th	87	11	12	2	0.95	0.81	4	1	—	—	2.07	0.32	0.97
9th	44	7	9	—	0.51	0.58	3	2	—	—	2.07	—	0.54
10th	30	2	4	1	0.31	0.34	—	—	—	—	—	0.95	0.31
11th	11	—	3	—	0.12	0.18	—	1	—	—	0.42	0.63	0.12
12th	8	—	1	—	0.08	0.06	—	1	—	—	0.42	0.63	0.08
13th	5	2	1	—	0.07	0.05	—	—	—	—	—	—	0.07
14th	—	—	—	—	—	0.05	—	—	—	—	—	0.32	—
15th	2	1	—	—	0.02	0.02	1	—	—	—	0.42	—	0.03
16th	1	—	—	—	0.01	0.01	—	—	—	—	—	0.32	0.01
17th	—	—	—	—	—	—	—	—	—	—	—	0.32	—
Totals ..	10,165	889	655	97	100.00	100.00	117	111	2	11	100.00	100.00	100.00
				11,806				241					
								12,047					

It is interesting to compare the size of the average family and the age of the mother of each new investigated birth in 1956 as compared with 1935 when the analysis was first made. Tables for these two years are as follows:—

(1) Age of mothers at birth of children during 1956 showing place in family of each birth

Age groups Years	Place in family																Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16		
15—	524	82	8	—	—	—	—	—	—	—	—	—	—	—	—	614	
20—	1,987	974	316	97	31	6	3	1	—	—	—	—	—	—	—	3,415	
25—	1,049	1,227	637	388	180	74	36	12	4	2	—	1	—	—	—	3,610	
30—	440	699	587	387	221	132	84	39	16	15	3	1	—	1	—	2,625	
35—	136	261	270	201	156	98	80	50	30	10	7	3	3	2	—	1,307	
40—	41	63	82	80	61	42	30	14	14	9	5	4	5	1	1	452	
45—	—	3	4	3	4	2	4	1	1	1	—	1	—	—	—	24	
	4,177	3,309	1,904	1,156	653	354	237	117	65	37	15	10	8	4	1	12,047	

(2) Age of mothers at birth of children during 1935 showing place in family of each birth

Age groups Years	Place in family																			Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19		
15—	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32	
20—	1,617	718	184	39	9	9	1	—	—	—	—	—	—	—	—	—	—	—	2,56	
25—	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—	3,43	
30—	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—	2,44	
35—	118	288	235	194	159	132	111	89	65	30	16	6	4	1	2	—	—	—	1,44	
40—	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	1	1	1	49	
45—	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—	5	
	3,955	2,754	1,496	896	550	376	262	181	121	76	44	18	15	9	4	1	1	1	10,76	

The 1956 births are further analysed to show the difference between legitimate and illegitimate births and live and still-births.

Age of mothers at birth of live children during 1956
(A) Place in family of each investigated birth (legitimate)

Age groups Years	Place in family																Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16		
15—	421	76	8	—	—	—	—	—	—	—	—	—	—	—	—	505	
20—	1,814	922	296	87	29	6	2	1	—	—	—	—	—	—	—	3,157	
25—	964	1,161	596	360	152	70	35	9	4	2	—	1	—	—	—	3,354	
30—	409	656	551	357	200	118	76	33	12	13	3	1	—	1	—	2,430	
35—	123	245	246	186	141	86	69	44	25	8	5	2	3	1	—	1,184	
40—	39	53	76	75	55	39	29	10	9	8	3	3	4	1	1	405	
45—	—	3	3	3	3	1	2	1	1	1	—	1	—	—	—	19	
	3,770	3,116	1,776	1,068	580	320	213	98	51	32	11	8	7	3	1	11,054	

(B) Place in family of each investigated birth (illegitimate)

Age groups Years	Place in family													Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	
..	87	4	—	—	—	—	—	—	—	—	—	—	—	91
..	142	40	19	7	1	—	1	—	—	—	—	—	—	210
..	60	54	29	21	23	4	1	3	—	—	—	—	—	195
..	20	31	26	23	14	13	4	5	2	2	—	—	—	140
..	7	15	14	8	9	9	5	4	3	2	1	1	—	78
..	2	6	6	3	5	2	1	2	4	1	2	—	1	35
..	—	—	1	—	1	1	—	—	—	—	—	—	—	3
	318	150	95	62	53	29	12	14	9	5	3	1	1	752

Age of mothers at birth of still-born children during 1956

(A) Place in family of each investigated still-birth (legitimate)

Age groups Years	Place in family												Total births
	1	2	3	4	5	6	7	8	9	11	12	15	
..	11	2	—	—	—	—	—	—	—	—	—	—	13
..	29	10	1	3	1	—	—	—	—	—	—	—	44
..	25	11	11	7	5	—	—	—	—	—	—	—	59
..	11	12	10	7	7	1	3	1	2	—	—	—	54
..	6	1	10	6	6	3	6	2	2	1	—	1	44
..	—	4	—	2	1	1	—	2	1	—	1	—	12
..	—	—	—	—	—	—	2	—	—	—	—	—	2
	82	40	32	25	20	5	11	5	5	1	1	1	228

(B) Place in family of each investigated still-birth (illegitimate)

Age Groups					Place in family					Total Births
Years					1	2	3	4	7	
1	..	..	..	..	5	—	—	—	—	5
2	..	..	..	..	2	2	—	—	—	4
2	..	..	..	..	—	1	1	—	—	2
3	..	..	..	..	—	—	—	—	1	1
3	..	..	..	..	—	—	—	1	—	1
					7	3	1	1	1	13

Found children

The health visitors found 2,344 other children belonging to families which had moved into Manchester during the year. The year of their birth was as follows:—

776	born	1956
795	„	1955
235	„	1954
242	„	1953
296	„	1952

Deaths

399 deaths occurred amongst children under 5 years of age.

The classification according to age is:—

Children under 1 year	..	..	..	..	..	..	358
„ 1—2 years	..	..	..	..	..	..	18
„ 2—3 years	..	..	..	..	..	..	13
„ 3—4 years	..	..	..	..	..	..	7
„ 4—5 years	..	..	..	..	..	..	3
							399

The distribution according to age of children who died under 1 year was as follows:—

Died under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months	Total
126	88	27	52	36	20	9	358

Infant and child mortality rate per 1,000 live births and case mortality rates for measles and whooping cough

Year	Infant mortality rate	Mortality rate 1—2 years	Mortality rate 2—5 years	Mortality rate 1—5 years	Total cases of measles		Total known cases of whooping cough	
					Cases	Mortality per cent	Cases	Mortality per cent
1947 ..	59·76	4·1	3·1	7·5	9,008	·23	2,308	·78
1948 ..	42·12	3·2	3·9	7·1	10,650	·16	2,612	·73
1949 ..	38·24	2·7	4·5	7·2	6,485	·11	2,749	1·05
1950 ..	37·87	2·7	3·4	6·1	9,798	·08	4,187	·41
1951 ..	35·29	3·1	2·0	5·1	8,953	·01	2,255	·13
1952 ..	34·28	3·2	2·8	6·0	10,035	·06	2,636	·30
1953 ..	30·53	1·8	2·9	4·7	6,798	·03	2,112	·19
1954 ..	29·47	1·9	2·8	4·7	9,841	·03	1,642	·24
1955 ..	28·37	1·1	3·2	4·4	6,514	·03	1,166	·18
1956 ..	29·92	1·5	1·9	3·4	2,203	—	1,751	—

Health visitors also visited at the end of six months all mothers who had given birth to a still-born child or to a child who had died before reaching the age of one month, in order to ensure adequate ante-natal care should she subsequently become pregnant. 366 still-births and 332 neo-natal deaths occurred in the City during 1955. Special visits were made by the health visitors during 1955-56 to those mothers, and in this way 38 expectant mothers who might require special care were brought to the notice of the Department.

Prevention of break-up of families (Circular 27/54)

The Children's Officer is the co-ordinating officer for the committee set up to implement the recommendations of Circular 27/54 for the prevention of breakdown of families. Conferences are held at intervals depending on the number of families referred for consideration.

Valuable preventive work is achieved with some of the families as a result of the combined efforts of those taking part, in other families further deterioration is averted but action is always long-term and the casework in connection with these families is very time-taking, for the confidence of the parents must be gained if progress is to be made. Close co-operation with other social workers in the statutory and voluntary services is a prominent feature of the work of the co-ordinating committee. The health visitor attends to present her report and to take part in the discussions. By courtesy of the Chairman four student health visitors have been invited to sit in as observers at each conference, to gain experience, and this is very valuable to them during their training.

The prevention of accidents in the home

The prevention of accidents in the home is a matter for constant consideration and concern all the time, but a special drive was made in July to focus the attention of parents on this serious subject.

Reports of all burns and scalds accidents taking place in the home, and referred to the hospitals in the City for treatment either as in-patients or out-patients, are sent to this department, and the health visitor pays a visit of investigation to the home, and measures are taken to prevent future accidents. These reports are examined by the health visitor responsible for the preparation of the Parentcraft Teaching Exhibition material, and any relevant findings are embodied in the exhibition.

Screening tests for deafness in young children

42 health visitors have attended a short course of training at the Department of Education of the Deaf, The University, Manchester, arranged by Professor Ewing and Dr. Irene Ewing. Five health visitors have attended the two week course.

In addition to holding sessions of screening tests for deafness at the Child Welfare Centres, and guiding parents of deaf children in their own homes, they have taken part in demonstrations in relation to courses held at the Department of Education of the Deaf, this work should have far-reaching beneficial effects on young children found to have impaired hearing, because of early diagnosis and early treatment.

Co-operation with hospitals in the region

A health visitor is attached to the hospitals and clinics named below and the liaison thus formed has proved of great value both to the hospital and the health department:—

St. Mary's Hospital (Department of Child Health).
Duchess of York Hospital for Babies.
Booth Hall Hospital for Children.

A health visitor was seconded during 1956 to the Regional Hospital Board for duties mainly in connection with contact tracing work at the V.D. Clinics. She is based on St. Luke's Clinic.

Similarly a health visitor attended the Diabetic Clinic at the Manchester Royal Infirmary on one half day each week and carried out follow-up work with the patients attending there, and also other diabetic patients in the City.

Refresher courses

Health visitors have attended refresher courses arranged by professional organisations as follows:—

3 to Leicester
1 to Manchester
2 to Edinburgh
1 to Southampton

The 18th Annual Post-Certificate Refresher Course arranged in the department for health visitors, school nurses, tuberculosis visitors, and other nurses engaged in health education work, was held on the 23rd and 24th March 1956, in the Lesser Free Trade Hall. The theme was "The Substance of Mental Health."

Co-operation with School Health Service

A report on every child reaching school age and known, on the health visitor's final visit, to be suffering from medical defect or to have an unsatisfactory family history, is referred to the School Health Service; 605 such summaries were sent during the year, classified as follows:—

Unsatisfactory condition of child	432
Unsatisfactory condition of family	7
History of tuberculosis in child	15
History of tuberculosis in family	139
History of rheumatism in child	7
History of rheumatism in family	5
Total	605

Defective children

(1) Total number of defective children from 0—5 years on the register on 31st December, 1956	938
(2) Number of those who were born during 1956	199
(3) The number in (2) who recovered	none
The number in (2) who died	61
The number in (2) who removed out of Manchester	7
Total number still on the register on 31st December, 1956	131
	199

(4) Number of children who had, during the year, reached the age of 2 years and were referred to the School Health Service in accordance with the Education Act, 1944, Section 34	320
(5) Number of children under five years of age notified during 1956 as suffering from poliomyelitis	48
(6) Number in (5) suffering from paralysis and still requiring treatment	32

Welfare of women and children on canal boats

Manchester canal carrying companies do not allow women and children on their boats, but women and children are still found on some of the " narrow boats ".

Arrangements are made for an official of the Docks to inform the Health Department when these boats are in the Docks and in addition, the health visitor makes an investigation each time she is in the area.

During the year, many visits were paid but only on five occasions were there boats in with families on board.

Family 1. Accommodation—three boats for one family; condition clean; occupants—Father and mother, children: boy 16 years, boy 15 years, boy 12 years and boy 2 years, girl 14 years, girl 12 years, girl 6 years, girl 4 years and girl born 16th July, 1956—All appeared well.

This family tied up at the Manchester Docks three times during 1956.

Family 2. Accommodation—two boats; condition very clean; occupants—Father and mother and one baby born 25th July, 1956—All appeared well.

Family 3. Accommodation two boats; condition clean; occupants—Father. Children: girl of 18 years, girl 4 years and girl 2 years. The eldest sister looks after the family. The mother died recently in Wolverhampton.

Several other boats with families tied up at the Docks for short periods, but the health visitor was unable to contact them owing to their short stay, which on some occasions was only for a few hours.

The number of mothers and children on the boats is declining. Many of the parents appreciate the importance of arranging for their children's education while they are on the boats, but many of the parents and children are illiterate and are unable to read or write.

Welfare of aged and infirm persons and the sick

The work carried out by the health visitors for the older age-groups increases each year as her services become better known to general practitioners, hospital staffs, and others. Supervision is requested for persons awaiting admission to hospital, those discharged after treatment in hospital, those who are being cared for by relatives in their own homes, and the most difficult of all, those living alone and unable to care for themselves, but wishing to remain at home.

Special provision is made in the National Assistance Act, 1948, for securing the necessary care and attention for persons who:—

- (a) are suffering from grave chronic disease, or being aged, infirm or physically incapacitated, are living in insanitary conditions; and
- (b) are unable to devote to themselves and are not receiving from other persons proper care and attention.

7,888 individual visits were paid by health visitors to 1,850 persons whose circumstances were reported to be unsatisfactory and were brought to the notice of the Department, including 1,031 brought forward from last year.

In dealing with these cases, the Department continued to maintain close liaison with the Welfare Services Department, the Manchester District Nursing Institution and hospital almoners.

During the year 54 persons were sent to "Binswood" for a recuperative holiday: all were over 70 years of age.

Details follow with regard to the action taken to deal with the cases reported and the comparable figures for 1955, and figures showing the increase in the number of persons referred to the department and visits paid from 1948 to 1956

Aged and infirm persons dealt with by health visitors						
1948—1956						
1948	New patients	..	..	..	..	14
						Visits paid .. 123
1949	Brought forward from 1948	..	..	..	8	
	New patients	..	..	..	279	
					—	287
						Visits paid .. 680
1950	Brought forward from 1949	..	..	..	15	
	New patients	..	..	..	469	
					—	520
						Visits paid .. 1,592
1951	Brought forward from 1950	..	..	..	172	
	New patients	..	..	..	701	
					—	873
						Visits paid .. 2,738
1952	Brought forward from 1951	..	..	..	336	
	New patients	..	..	..	722	
					—	1,058
						Visits paid .. 3,211
1953	Brought forward from 1952	..	..	..	521	
	New patients	..	..	..	945	
					—	1,466
						Visits paid .. 5,301
1954	Brought forward from 1953	..	..	..	593	
	New patients	..	..	..	985	
					—	1,578
						Visits paid .. 6,441
1955	Brought forward from 1954	..	..	..	756	
	New patients	..	..	..	975	
					—	1,731
						Visits paid .. 6,331
1956	Brought forward from 1955	..	..	..	885	
	New patients	..	..	..	965	
					—	1,850
						Visits paid .. 7,888

Details follow with regard to the action taken to deal with the cases reported, and the comparable figures for 1955 :—

	1955	1956
Voluntary admissions to hospitals—		
Crumpsall	77	93
Withington	212	202
Manchester Royal Infirmary	16	21
St. Thomas Hospital, Stockport	1	1
Salford Royal	2	1
Monsall	9	5
Bridgewater	—	2
Royal Eye	1	1
Ancoats	7	2
Hope	2	2
Wythenshawe	9	5
Christie	—	1
Park Hospital, Davyhulme	1	2
Lake Hospital, Ashton-under-Lyne	—	1
Wrightington Sanatorium	—	1
Lancaster Infirmary	—	1
St. Josephs	1	3
Jewish	1	—
Northern	1	—
Birch Hill Hospital, Rochdale	1	—
Chronach Hospital, Chorley	1	—
Fairfield Hospital, Bury	1	—
Admitted to nursing homes—		
Little Sisters of the Poor	5	7
Alexian Brothers	—	1
Brantingham	—	2
Methodist Mission Home	—	1
Jewish Home for the Aged	2	2
Salvation Army Home	—	2
Private	4	7
Transferred to—		
Mental Health Section	11	9
Welfare Services Department	100	78
Sanitary Services Division	3	7
Tuberculosis (Care and After-care)	2	1
Died at home	165	158
Killed in street accident	1	1
Removed to care of relatives	16	14
Unable to trace	10	4
Asphyxiated due to drowning	1	—
Removed outside Manchester area	8	13
Recovered (nursed at home)	5	4
Compulsory removals under Section 47 of the National Assistance Act, 1948	29	26
Discharged—no further action necessary	141	138
Carried forward at 1st January, 1956 and 1st January, 1957	885	1,031
	1,731	1,850
Total number of visits paid during period 1st January, 1955 to 31st December, 1955	6,333	—
Total number of visits paid during period 1st January, 1956 to 31st December, 1956	—	7,887

Particulars of persons dealt with under Section 47 of the
National Assistance Act, 1948, and (Amendment) Act, 1951,
during the year 1956 and those carried forward
from 1953, 1954 and 1955

11 persons were still under supervision on 1st January, 1956.

Brought forward from 1953	1
„ „ „ 1954	3
„ „ „ 1955	7
Total	11

			Brought forward
1953 cases brought forward to 1st January, 1956	1		
Died during 1956	1	—	
1954 cases brought forward to 1st January, 1956 ..	3		
Settled in accommodation during 1956 and renewal of court order not necessary ..	1		
Court order still in force	2	2	
1955 cases brought forward to 1st January, 1956 ..	7		
Settled in accommodation during 1956 and renewal of Court orders not necessary ..	3		
Recovered and discharged home	1		
Died during 1956	3		
Court order still in force	—	—	
1956 new cases	26		
Settled in accommodation during 1956 and renewal of Court orders not necessary ..	15		
Discharged home to care of relatives and friends	3		
Died during 1956	3		
Absconded from Newholme	1		
Court orders still in force	4	4	
Number carried forward to 1st January, 1957	6		

Summary of cases still in accommodation under
Court order from 1954 and 1955, and those
dealt with for the first time during 1956:—

Settled in accommodation during 1956 and extension of Court order not required.. .. .	19	} 36
Died	6	
Discharged home	4	
Absconded from Newholme	1	
Court order still in force	6	

Number carried forward to 1st January, 1957 6

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	70+	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 23rd December, 1955 but bed not available until 12th January, 1956	Undernourished and jaundiced. Neighbours unwilling to help on account of dirty and verminous conditions. Patient slept on a couch or the floor. Fire unguarded	Settled in Newholme, 5th March, 1956
M.	58	Suffering from grave chronic disease. Living in insanitary conditions. Unable to devote to himself, and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 7th February, 1956	Very undernourished and extremely weak. Had previously looked after himself but became too weak to do so. House filthy and in a very bad structural condition. Doctor's certificate — cardiac debility and malnutrition	19th August, 1956. Reported absconded from Newholme. Present address not known.
F.	79	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 13th February, 1956	Very senile. Mentally confused. Not seen by neighbours for two days. Police forced an entry and found occupant without fire or coal or food. Neighbours objected to helping due to dirty conditions	Settled in Newholme, 15th May, 1956
F.	75	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 29th February, 1956	Lived alone. No known relatives. Very senile for her age. Confused mentally and condition deteriorating. Quite unsuitable to live alone	Settled in Newholme, 31st May, 1956
F	76	Aged and infirm. Physically incapacitated. Suffering from grave chronic disease	3 weeks	Chronic sick bed, Crumpsall Hospital	Court Order taken out 12th March, 1956	Lived alone. Ill. Bedfast and doubly incontinent. Senile. Found on the floor on two occasions by the district nurse	Died in Crumpsall Hospital, 25th March, 1956
M.	73	Suffering from grave chronic disease. Aged and infirm. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 12th March, 1956	Suffering from carcinoma of mouth. Undernourished. Wife ill in hospital. Neighbours refused to give further help as patient was very abusive	Settled in Withington Hospital 31st May, 1956
F.	? 66	Aged and infirm. Physically incapacitated. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 27th March, 1956	Lived alone in one room. Collapsed at home and no-one to give her care and attention. Only relative one elderly sister living in Ireland	Settled in Newholme, 2nd July, 1956

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
M.	80	Aged and infirm. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 27th March, 1956	Lived alone. Suffering from bronchitis. Incontinent. Spent most of the day in a public house. Only relative elderly sister living in Dundee. Totally unfit to live alone	Settled in Newholme 2nd July, 1956
F.	59	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 10th April, 1956	Gross oedema of legs. Very breathless on exertion. Abusive and refused to allow anyone in the house, including the doctor. Probably a cardiac case. Totally unfit to live alone	Discharged home, 17th November, 1956
F.	81	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 20th April, 1956	Lived alone. Very dirty habits. Unfit to live alone	Settled in Newholme, 10th July, 1956
F.	54	Suffering from a grave chronic disease. Physically incapacitated. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 10th May, 1956	Epileptic. Osteomalacia. Bedfast. Had bilateral fractured femurs and extensive head injuries, due to fall during an epileptic attack two years previously. Difficulty in getting about since that date. Condition deteriorated since daughter-in-law who lived here, went to her husband in Germany. Husband at work all day	Settled in hospital. No need to renew Court Order, 18th May, 1956
F.	78	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington	Court Order taken out 17th May, 1956	Very senile and confused. Personal habits dirty. Refused any help with personal attention or cleaning of her room: totally unfit to live alone	Died in Withington Hospital, 21st May, 1956
F.	74	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 13th June, 1956	Very undernourished. Physical condition deteriorated rapidly. Unfit to live alone	Discharged home to care of friend, 4th September 1956

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
M.	71	Aged and infirm. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 13th June, 1956	Lived alone in one room. Very undernourished. Lived mainly on tea, bread and margarine. Treated as in-patient in M.R.I. on two occasions for deficiency diseases. Condition deteriorated again. Refused admission to Part III accommodation	Settled in Newholme, 20th November, 1956
M.	80	Aged and infirm. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 12th July, 1956	Senile and almost blind. Refused to eat and also refused to go to bed. Had been in hospital but took his own discharge against advice and later refused to go into hospital or Part III accommodation	Settled in Newholme, 9th October, 1956
M.	88	Aged and infirm. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 18th July, 1956	Very senile. Unfit to live alone. Neighbourhood unwilling to help owing to dirty habits, spitting etc.	Discharged to care of son in Rochdale, 9th August 1956
F.	76	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 2nd July, 1956	Very senile. Confused. Speech irrational. Unfit to live alone. Neighbourhood refused to help on account of filthy state of house	Settled in Newholme, 20th September, 1956
F.	72	Aged and infirm. Living in insanitary condition. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Crumpsall Hospital. Transferred to Newholme 17th September, 1956	Court Order taken out 30th July, 1956	Found on floor in collapsed condition by police who had to break into the house. Doctor's report:—Uraemic. Confused. Vomiting. Patient refused to go to hospital when ambulance called	Settled in Newholme, 20th November, 1956
F.	80	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 17th October, 1956	Deterioration of mental and physical condition. Refused all offers of help. Very unsteady on her feet. Used small paraffin stove which was dangerous. Unfit to live alone	Settled in Newholme, 18th December, 1956
M.	87	Aged and infirm. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 17th October, 1956	Took own discharge from Newholme against advice. Very dirty in habits. Refused to wash or to let landlady do any cleaning in his room	Court Order to be renewed at appropriate date if still required

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	80	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 17th October, 1956	Undernourished. Spent money on drink and not on adequate food. Room foul smelling and littered with scraps of food. Unfit to live alone	Court Order to be renewed at appropriate date if still required
F.	79	Aged and infirm. Physically incapacitated. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme, 1st December, 1956. Transferred to Withington Hospital	Court Order taken out 17th October, 1956	General condition deteriorated rapidly. Confused and wandered outside. Refused all offers of help	Settled in Withington Hospital, 17th December, 1956
F.	66	Physically incapacitated. Collapsed at home. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 7th November, 1956	Very undernourished over long period. Had large untreated varicose ulcer on right leg. Refused hospital treatment. Found in collapsed condition on kitchen floor and admitted to M.R.I. 12th October, 1956. 7th November, 1956, transferred to Newholme—Part III accommodation	Court Order to be renewed at appropriate date if still required
F.	81	Suffering from grave chronic disease	3 months	Chronic sick bed, Withington Hospital	Court Order taken out 21st November, 1956	Lived with daughter who was unable to manage to give mother adequate care owing to mother's dirty habits following incontinence. Patient had extensive bed sores. Refused hospital admission. Daughter's health not good	Died in Withington Hospital, 25th November 1956
F.	83	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 20th December, 1956	Very senile and confused. On 20th December, 1956, not seen for a whole day and milk not taken in. Police contacted by neighbours. Unfit to live alone	Settled in Newholme, 31st December, 1956
F.	87	Aged and infirm. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Chronic sick bed, Withington Hospital	Court Order taken out 19th December, 1956	Very senile and confused. Refused help from relatives and neighbours. In danger of falling on fire when alone	Court Order to be renewed at appropriate date if still required

Verminous conditions and scabies

Persons treated for verminous conditions at Monsall Clinic

Year	Males adult	Females adult	School children	Children under 5	Total persons
1952	460	112	260	25	857
1953	382	106	181	26	695
1954	426	128	404	12	970
1955	323	113	457	19	912
1956	262	112	474	11	859

The Department has a scheme for supplying special steel combs at cost price to mothers and 4 steel combs were so distributed during 1956.

Scabies

The main source of notification of scabies is the School Health Service, but many cases are brought to the notice of health visitors, either as contacts of those notified by the School Health Service or as new cases.

The source and number of notifications received during 1956 and the preceding years were as follows:—

Sources of notification of scabies

	1952	1953	1954	1955	1956
School Health Service	156	149	268	162	128
Hospitals	21	30	26	28	31
General practitioners	100	118	145	96	125
Sanitary medical officers	9	1	8	4	—
Health visitors	18	25	13	20	8
Children's Department	—	—	3	3	—
Applied voluntarily	93	42	75	69	42
Discovered at Monsall Clinic	33	17	28	23	3
Salvation Army	—	—	1	4	4
Ministry of Health	1	2	—	—	—
Business houses	1	—	—	—	—
Day nurseries	—	—	4	—	—
S.P.C.C.	3	—	—	—	—
Totals	435	384	571	409	341

National Society for the Prevention of Cruelty to Children

The Department is again indebted to this Society for assistance in dealing with certain difficult cases. During the year help has been obtained by many members of the staff from decentralised Child Welfare Centres by personal contact, as well as from the Central Office.

Training of Student health visitors

The course for the training of health visitors is arranged by the Manchester College of Science and Technology, in co-operation with the Health Department. It has the approval of the Ministry of Health.

The students gain practical experience in many departments of the local authority, such as the School Health, Children's and Welfare Services departments in addition to their basic training with the health visitors.

Many interesting observation visits are arranged and the students are given an insight into the work of a rural health visitor and of a neighbouring County Borough.

Skilled and experienced lecturers take part in the theoretical training, which is given at the College of Science and Technology. In addition, tutorials, debates, discussion groups and other media of health education are arranged and the principles of report-writing and family casework are taught.

This year, at the suggestion of the Ministry of Health, the Course has been lengthened by six weeks and now extends over one academic year. Also, with the approval of the Ministry, a complete 'block-system' of training has been established which appears to be an all-round improvement, of great benefit to the students.

An exhibition of some aspects of the students' work is held yearly and is incorporated with the annual departmental Refresher Course for public health nurses and health visitors. The exhibition is arranged and staffed entirely by the students themselves and illustrates their group theses, previously prepared as part of their social work projects. Many of the garments and toys on exhibition are also made by them at a minimum cost. The exhibition is always most interesting and is very well attended.

Forty-eight students were entered for the examination of the Royal Society of Health at the end of May, 1956. Of these, 41 were successful at the first attempt and the remaining seven students have since qualified.

On the Course now in progress, 30 students are enrolled, of whom 13 are sponsored by the City Council.

NURSING HOMES REGISTRATION

(Public Health Act, 1936, Sections 187-194)

There was no addition to the number of registered nursing homes during the year. One home for maternity patients was discontinued.

At the end of the year the total number registered was 12 of which three were registered for maternity patients, two for maternity, medical and surgical patients, one for medical cases only, two for medical and surgical cases and four for medical or chronic patients.

The number of exemptions granted to voluntary hospitals under Section 192 of the Public Health Act, 1936, was increased during the year by one, making a total of five.

All the registered nursing homes were visited regularly by a medical officer of the Health Department.

DAY NURSERIES

Day Nurseries in Manchester are playing an integral and important part in the social and welfare life of the City, and the development from their original use as "wartime" nurseries to their present functions may be reviewed.

By 1943, 1,450 children were accommodated in 30 nurseries, 4 of which were used partially as 24 hour nurseries. It was a rule of the Corporation that the parents or parent must be engaged in full time work of National importance and where the father was in the services only children of mothers on night work at the munition factories were allowed to sleep on the premises. Towards the end of 1944 the married women with children were, generally, switched to the day shift, the necessity for 24 hour nurseries no longer existing, the hours of opening were then fixed as 7 a.m. to 7 p.m., Monday to Friday, and 7 a.m. to 7 p.m. on Saturday. These hours were again revised and in 1949 a five day week came into operation.

The number of day nurseries has been reduced, due in one case to the Education Committee requiring the building for school purposes and in two cases where the leases had expired and it was decided not to renew them. There are now 27 day nurseries maintained by the Local Authority with a place capacity of 1,360.

Although the accommodation is still primarily for children whose mothers are working, with priority of place to unmarried mothers and widows, assistance is given by providing accommodation for various other reasons, e.g., children from problem families where rehabilitation is necessary, desertion by parent, mother's long-term stay in hospital; and, more recently, short term accommodation, i.e., three to six months has been allowed where extreme financial difficulties have been encountered by the parent. This latter service has been successful and greatly appreciated. During the year 363 applications for children to be admitted for two weeks were received from hospital mothers and from mothers pending confinement.

During the year 1,504 children were admitted and 1,513 were discharged and with a waiting list of 1,379 each vacancy is filled as it arises. The increase of 10 per cent. of names on the register ensures a reasonably good attendance.

Month	1955	1956
	Total attendance	Total attendance
January	21,874	20,611
February	22,456	21,575
March	23,489	28,668
April	29,035	22,851
May	25,543	27,791
June	21,695	26,017
July	28,765	25,524
August	19,477	21,859
September	32,441	24,696
October	26,441	24,714
November	25,835	21,117
December	27,919	20,846
Total	304,970 (249 days)	296,296 (247 days)

The charge is still three shillings per day where two parents are gainfully employed, and two shillings and threepence where there is only one parent. There has been a distinct increase in the number of children qualifying for the lower charge. Free places granted by the Health Committee were allocated to necessitous cases for a period of one month with a further review if it is considered absolutely necessary. The cases dealt with have been where both parents have been incapacitated and where widows and unmarried mothers have been admitted to hospital leaving the child in the care of relatives without means of support. 26 such places were made available.

All children are medically examined prior to admission to the nursery and 4,982 routine medical examinations were carried out. Mothers have taken full advantage of the facilities provided to have their children immunized against whooping cough and diphtheria.

Accidents of a minor nature have occurred and been dealt with expeditiously in all instances medical advice was obtained. Measles was the main source of infection during the early part of the year, but in a large percentage of the nurseries no case of any type of infection has occurred during the latter half of the year. The vigilance of the staff has done much to reduce the spread of Sonne dysentery.

Burglaries are decreasing; the main offenders are young boys creating malicious and wilful damage. In some instances there have been prosecutions.

The introduction of gaily coloured plastic utensils for use in the bathroom has proved a popular and worth-while decision; so has the installation of stove for all night burning which ensures well heated nurseries.

The decision by the Health Committee to close the nurseries for one full week during the summer, i.e., one half the day nurseries the last week in July and the remaining half the first week in August has been the means of all children requiring accommodation during either week having their requirements met.

14 Nursery Students successfully completed the training for the National Nursery Examination Board Certificate. 6 Nursery Assistants obtained the Class I certificate and 9 qualified for the Class II certificate.

Full use is made of the nurseries for educational purposes by visits of medical students, social administration students, and student health visitors, to observe the work and activities. Various requests from the Girl Guide Organization for guides to attend the nurseries in order to qualify for the Child Nurse Badge have been granted.

Re-surfacing and improvements have been made to some nursery grounds and all major alterations have now been completed and the accent in 1957 will be in the choice of colour schemes for interior decorating.

TUBERCULOSIS SERVICE

This section of the Care and After-care Service, implements the provisions of Section 28, Part III of the National Service Act, 1946, and is administered by the Local Health Authority at 352, Oxford Road, Manchester, 13. The building is leased in part as a chest clinic to the Manchester Regional Hospital Board, who provide for the clinical aspects of the disease. Information is exchanged between the two services and the patient and family receive immediate and practical assistance to help recovery and prevent the spread of infection.

Experienced staff is available to interview patients on their attendance at the Chest Clinic and advice is given on social problems, financial assistance and help in kind provided by official and voluntary organisations in the City.

tuberculosis health visiting

The 38 municipal wards of the City are divided into 15 districts, a tuberculosis visitor being responsible for each area. Health visitors also take part to a very limited extent in the work of the Chest Clinic, each visitor spending approximately four weeks per year on these duties. The visitors are, however, able to consult the chest physicians on any cases under supervision.

On the receipt of a notification of a case of tuberculosis, the family is visited by a trained tuberculosis visitor who reports on all aspects of the health and social conditions of the household. Advice is given on hygiene and nutrition and if there is a financial shortage steps will be taken by the department to supplement an inadequate income. Enquiry is made as to the possible source of infection, and every endeavour is made to secure the isolation of an infective case, if necessary by the loan of a bed and bedding. Nursing requisites are available on free loan to patients on domiciliary care, and these include bed-rests, air-rings, urinals, bed pans, mackintosh sheeting, etc. Contacts are encouraged to attend the Chest Clinic for examination and definite appointments are made by visitors for this purpose.

Student health visitors are instructed in the work of the Section and are sent on the district by the tuberculosis visitors and shown the practical side of the work.

Financial Assistance Board

In assessing the special allowances made to tuberculous patients, much useful information is exchanged between the officers of the Board and the Care and After-care section. The Board assists patients and their families with monetary grants to obtain extra nourishment, clothing, bedding and other essentials. The officers of the Board at all times show a sympathetic understanding of the needs of these families and their close co-operation has been valuable to the work of the section.

Food grants

Necessitous patients and families receive food grants if they qualify under the scale of income authorised by the City Council. This scale is amended as Financial Assistance Board grants are increased, and the relationship between the two scales is preserved.

Home helps

Home helps are provided and give valuable aid to those tuberculous households where illness has seriously limited the domestic work of the home.

Home helps undertake this particular work voluntarily and as a precautionary measure the helps have periodical X-ray examination at the Chest Clinic.

Housing

Any sanitary defect in a dwelling noted by the tuberculosis health visitor is reported to the Chief Public Health Inspector for necessary action. The premises are visited and, where possible, landlords are persuaded to remedy the bad conditions.

Tuberculous patients and families living under unsatisfactory conditions are recommended for the tenancy of council houses or flats, but a definite recommendation for priority is only made after a full review of all the circumstances, and a great deal of time is devoted to assessing housing applications. The primary consideration is the isolation of an infective patient, but when it is thought a patient's home environment will militate against recovery, then an appropriate recommendation is made on these grounds.

During the year 472 housing applications were referred to the chest physicians for comments.

Disinfection of premises—bedding, etc.

The fumigation of rooms occupied by a patient is advised and carried out when he is admitted to sanatorium, changes his residence or dies. Arrangements are also made for the disinfection of bedding and clothing as required.

Employment

A tuberculous patient who finds it difficult to obtain work within his physical capacity is referred to the Rehabilitation Officer of the Ministry of Labour. Interviewing panels are held at the Chest Clinic where the patient, the Chest Physician, the Disablement Rehabilitation Officer and a member of the After-care staff meet to consider the placing of the man in suitable employment. In some instances courses of training and/or rehabilitation are necessary.

Colonization

During the year the Health Committee has accepted financial responsibility for the rehabilitation and accommodation of suitable tuberculous patients in village settlements, colonies, etc., and there are 2 patients in the East Lancashire Tuberculosis Colony at Great Barrow, near Chester, 1 in the Papworth Village Settlement, Cambridgeshire, 1 in the British Legion Village, Preston Hamlet, Maidstone, Kent, and 1 in the Cheshire County Colony, Wrenbury Hamlet. There are also 3 patients who are at present undergoing observation with a view to colonization at a later date.

Children

The Children's Officer arranges for certain child contacts to be taken in care whilst a patient is under treatment at home or in sanatorium. The contact, however, must be examined at the Chest Clinic and certified to be free of tuberculosis.

The district health visitors are informed of all newly notified tuberculous children and contacts under five years of age, and the School Medical Officer is informed of all children of school age and teaching staff who become tuberculous.

It is of interest to record that a tuberculous child admitted to the Abergavenny Hospital has the benefit of a school curriculum administered and staffed by the Manchester Education Department, and can be educated to School Certificate standards.

B.C.G. vaccination

On the primary investigation of a newly notified case of tuberculosis, the tuberculosis health visitor makes a careful enquiry into the contacts of a household and broaches the question of B.C.G. vaccination. If the contacts are willing a Tuberculin Jelly Patch test is performed immediately by the health visitor in the home. The test is read by the Chest Physician and the contact proceeds, if suitable, to B.C.G. Vaccination through the normal channels. Segregation of the contacts is arranged when necessary and the Children's Officer, foster parents and institutional authorities assist in this regard.

The following table is a record of the work of the B.C.G. Clinic since March, 1951:—

Year	Number of B.C.G. sessions	Number of Mantoux and Jelly Patch Tests	B.C.G. vaccinations
1951	64	2,044	507
1952	99	3,093	881
1953	93	3,382	872
1954	89	3,536	777
1955	94	3,612	788
1956	93	4,268	745

Mass miniature radiography

At a meeting in the autumn of 1955 between representatives of the Health Department and the Regional Hospital Board, it was decided to carry out health surveys by mass miniature radiography in selected areas within the City. The first of these was centred on the Ancoats district.

The complete results are now to hand and the following report has been provided by Dr. Walshaw, the Medical Director of No. 2 Unit and also of the survey:—

This survey began on the 15th November, 1955, and was completed on the 1st March, 1956. During the whole of this period the No. 2 Mass Radiography Unit was in the New Islington Public Hall. Amongst the groups examined were National Service recruits, industrial and office workers, school leavers, cases referred by private practitioners, and employees of local authorities whose work brings them into close contact with children. Individual members of the public were also included, as were the crew of a foreign merchant ship in which a case of tuberculosis had been found. For most of this period we were fortunate to have the help of the Board's No. 3 Mass Radiography Unit. From the 21st to 25th November, and from the 30th November to the 1st January, this Unit operated in Mayfield House, and subsequently till the 2nd February undertook a series of examinations in various industrial premises in the vicinity.

	Male	Female	Total
Total number of examinations	15,501	10,455	25,956
Of these, 2,946 were resident in the Ancoats area.			
<i>Respiratory tuberculosis:</i>			
Requiring immediate treatment:			
All examinations	40	11	51
Rate per thousand	2.6	1.0	1.9
Residents in the Ancoats area	13	4	17
Rate per thousand			5.0
Requiring supervision at chest clinics:			
All examinations	59	20	79
Rate per thousand	3.8	1.9	3.0
Residents in the Ancoats area	18	2	20
Rate per thousand			6.0
<i>Bronchiectasis:</i>			
All examinations	45	18	63
Rate per thousand	2.9	1.7	2.3
Residents in the Ancoats area	13	5	18
Rate per thousand			6.0
<i>Carcinoma bronchus:</i>			
All examinations	5	3	8
Rate per thousand	0.3	0.3	0.6
Residents in the Ancoats area	3	2	5
Rate per thousand			1.0

Amongst other abnormalities discovered were 6 benign tumours, including 1 hydatid cyst, 1 mediastinal dermoid and 1 neurofibroma; 2 cases of sarcoidosis, 1 case of lymphadenoma and 1 spontaneous pneumothorax."

Three other reviews have been made during the year and it is hoped to publish the results in the Annual Report for 1957.

Co-operation with other bodies

There is a close liaison between the Section and the National Assistance Board, the Ministry of Labour, the Welfare Services of the Ministry of Pensions, the British Red Cross Society, and various other official and voluntary organisations who are ready to help patients in various ways. Requests for information are received from medical superintendents and hospital almoners, especially in regard to home environment and domestic problems. It is essential that the Care and After-care Section should co-operate in this way, as the results benefit many patients who do not qualify for direct assistance from the local authorities.

To avoid overlapping with other bodies, both voluntary and official, who give help to those in need, the department is a member of the Mutual Registration Council, an organisation which collects information from charitable institutions in the area, and transmits details of any assistance being given in such cases.

Close co-operation with the chest physicians and the clinical side of the work is essential in the prevention, care and after-care of a tuberculosis scheme. Staff experienced in social problems should be available for consultation at the Chest Clinic, with trained tuberculosis health visitors to be responsible for the home visiting and instruction of patients and families in the preventive aspects of the work.

Grants of food, milk, etc., are provided to necessitous families, and this assistance should be immediately available if it is to be effective. Close contact maintained with the National Assistance Board, the various sections of the Health Department, the Children's Officer, and all those official and voluntary organizations who care for the sick and needy.

Tuberculous patients and their families may require to be assisted in housing where there is a danger of infection and where environmental conditions militate against the patient's recovery.

In association with the Ministry of Labour every effort is made to find employment for the tuberculous patient who is capable of some form of work.

Financial provision is made for the admission of suitable patients to village elements for colonization, where they can be employed in sheltered industry.

Preventive, care and after-care work in relation to the tuberculous patient commences with the notification of a case and does not cease until the patient recovers, leaves the area or dies. It should proceed as systematically as the provision of treatment from which it cannot be separated and is an integral part of any scheme dealing with the disease.

Notification

The notification figures for new cases of respiratory tuberculosis show a reduction of 70 on the figures for the previous year, being 592 as compared with 662 in 1955.

The non-respiratory cases numbered 56, this being a decrease of 21 from the figure of 77 in 1955.

Respiratory tuberculosis

In males there was an overall reduction of 23 as compared with 1955. The most significant reductions were 18 in the 10-19 age groups and 29 in the 20-34 age groups. There was an increase of 11 in the 35-44 age group and in the 55-74 age group notifications increased by 14.

The female notifications were 47 fewer than in 1955, the most noticeable reductions being 8 in the 2-4 age group and 13 in the 20-24 age group.

Non-respiratory tuberculosis

The number of notified cases in males shows an appreciable reduction of 2 from the 1955 figure. There were 5 fewer notifications in each of the age groups 5-9, 15-19, and 35-44.

The female notifications were 3 more than in 1955 and do not call for particular comment.

In both respiratory and non-respiratory tuberculosis the figures are the lowest ever recorded in Manchester.

Mortality

Respiratory tuberculosis

The deaths from respiratory tuberculosis numbered 101, this being a reduction of 9 from the 1955 figure. There were 67 male and 34 female deaths.

Non-respiratory tuberculosis

In males and 5 females died from non-respiratory tuberculosis, the total being one less than in 1955.

A summary of the work of the Section

Tuberculosis health visitors:—

Primary investigations	784
Domiciliary visits	22,461
Post-deaths visits	98
Ineffective visits	3,828
Chest clinic sessions	758

Assistance to patients and families:—

Food grants	72
Loan of beds and bedding	53
Loan of nursing requisites	14
Sputum boxes issued	26,200
Sputum flasks issued	30

Disinfections by Corporation:—

Premises	303
Bedding	20

The statistics for the year are shown in the following tables:—

Primary notifications of and deaths from tuberculosis

Comparative figures 1936—1956

(Rates per thousand of the population)

Year	Primary notifications						General death rate, M cr.	Death rate all respiratory diseases except tuberculosis (M cr.)	Death rates, tuberculosis Manchester					
	Respiratory			Non-respiratory					Respiratory			Non-respiratory		
	M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate			M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate
1936	1.47	1.07	1.26	0.43	0.35	0.39	13.72	1.83	1.13	0.70	0.90	0.15	0.13	0.14
1937	1.73	1.03	1.36	0.52	0.46	0.49	13.87	1.70	1.14	0.72	0.92	0.18	0.14	0.16
1938	1.52	0.98	1.24	0.41	0.36	0.38	12.61	1.32	1.07	0.66	0.86	0.14	0.13	0.14
1939	1.49	0.96	1.21	0.40	0.36	0.38	13.39	1.30	1.10	0.64	0.86	0.16	0.13	0.14
1940	1.95	1.13	1.51	0.41	0.36	0.38	17.98	4.09	1.43	0.78	1.09	0.16	0.13	0.15
1941	2.12	1.16	1.61	0.45	0.41	0.43	16.64	2.81	1.45	0.84	1.13	0.19	0.19	0.19
1942	1.78	1.22	1.48	0.37	0.41	0.39	14.72	2.13	1.23	0.76	0.99	0.14	0.12	0.13
1943	1.78	1.25	1.50	0.41	0.49	0.45	15.50	2.64	1.14	0.71	0.91	0.16	0.15	0.16
1944	1.62	1.14	1.37	0.33	0.36	0.34	14.20	2.04	0.95	0.66	0.80	0.13	0.10	0.11
1945	1.73	1.23	1.46	0.34	0.31	0.32	11.41	2.33	1.00	0.62	0.80	0.16	0.10	0.13
1946	1.56	0.89	1.20	0.28	0.22	0.25	13.52	2.09	0.92	0.48	0.69	0.08	0.12	0.10
1947	1.41	0.91	1.15	0.21	0.18	0.19	13.79	2.11	0.88	0.46	0.66	0.11	0.08	0.09
1948	1.50	1.01	1.24	0.19	0.21	0.20	12.27	1.80	0.89	0.50	0.69	0.06	0.08	0.07
1949	1.58	1.02	1.28	0.20	0.24	0.22	12.91	2.10	0.76	0.45	0.60	0.06	0.04	0.05
1950	1.28	0.84	1.05	0.21	0.17	0.19	12.77	1.86	0.77	0.42	0.58	0.07	0.06	0.07
1951	1.23	0.82	1.02	0.13	0.17	0.15	13.82	2.50	0.61	0.32	0.45	0.05	0.06	0.06
1952	1.32	0.75	1.02	0.13	0.14	0.14	12.16	1.70	0.59	0.20	0.38	0.04	0.03	0.03
1953	1.32	0.83	1.06	0.12	0.14	0.13	12.31	1.86	0.39	0.19	0.28	0.04	0.02	0.03
1954	1.20	0.75	0.96	0.15	0.16	0.15	12.10	1.73	0.40	0.15	0.27	0.03	0.03	0.03
1955	1.16	0.78	0.96	0.13	0.09	0.11	12.68	1.93	0.26	0.12	0.19	0.02	0.02	0.02
1956	1.09	0.63	0.86	0.06	0.10	0.08	12.35	1.77	0.21	0.09	0.15	0.02	0.01	0.02

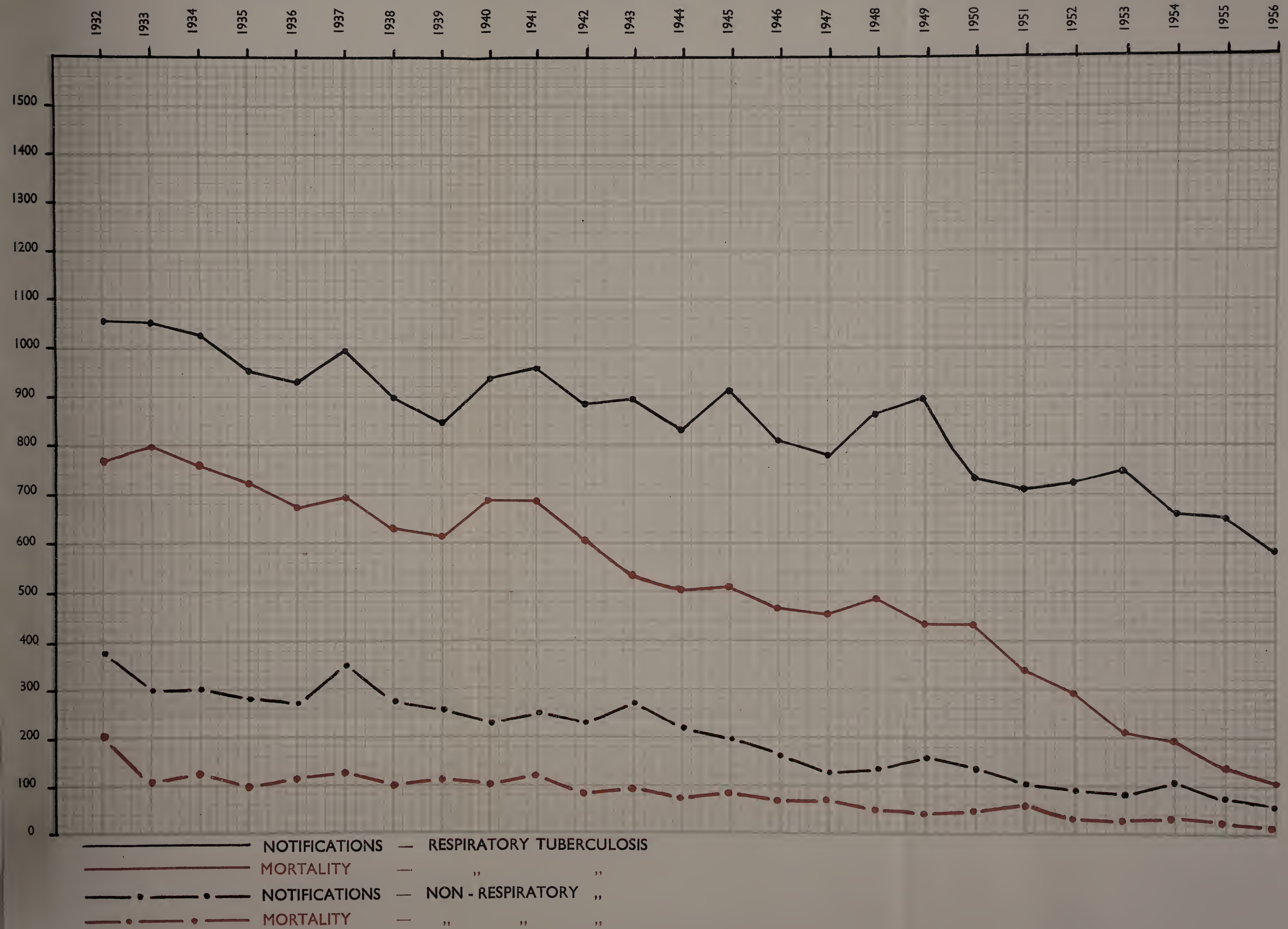
Tuberculosis (pulmonary and non-pulmonary)
Incidence and deaths in age groups for the years 1932 to 1956

Year	0 —				1 —				5 —				15 —				45 —				65 —				Total				Total	
	Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		All forms	Deaths
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths		
1932	1	2	6	7	60	14	130	28	710	455	154	33	243	254	26	11	23	30	3	5	1,061	766	388	199	1,449	885				
33	3	2	6	4	44	13	110	15	701	498	120	45	268	245	21	10	26	23	3	3	1,053	791	304	100	1,357	891				
44	—	8	7	52	54	12	105	27	666	449	120	50	258	252	17	9	26	40	1	2	1,026	761	303	120	1,329	851				
55	3	4	3	4	62	11	98	15	611	430	120	42	253	230	22	16	20	37	2	1	957	714	294	94	1,251	808				
66	1	1	4	3	49	17	98	25	615	396	109	36	235	223	25	15	32	31	3	3	937	671	289	105	1,226	776				
77	1	2	9	6	48	8	100	19	635	396	165	44	261	213	22	17	45	51	9	7	1,001	674	358	115	1,359	789				
88	6	3	9	53	54	5	87	24	577	350	124	29	231	235	18	15	32	30	6	6	907	627	282	99	1,189	726				
99	3	1	3	43	34	6	66	14	559	355	112	41	205	202	22	14	40	34	3	3	849	601	265	100	1,114	701				
1940	3	1	3	28	31	6	68	13	620	408	112	39	242	208	23	11	43	52	6	4	943	678	239	91	1,182	769				
1	3	3	3	46	35	6	57	18	610	366	124	42	266	241	13	11	39	61	4	7	968	679	258	115	1,226	794				
22	—	5	2	31	35	5	68	12	615	338	119	34	209	206	24	9	30	41	1	5	894	592	234	80	1,128	672				
33	1	1	2	29	29	4	68	14	614	291	138	41	211	212	26	13	34	36	7	2	900	546	272	93	1,172	639				
44	2	3	3	32	41	4	39	12	522	275	114	21	213	174	20	14	44	35	3	3	840	491	211	68	1,051	559				
55	3	3	6	28	35	7	57	14	606	257	91	28	213	177	15	8	37	50	3	5	913	496	200	81	1,113	577				
66	3	4	6	29	44	4	44	10	517	282	71	22	195	171	13	11	32	51	6	1	805	460	168	67	973	527				
77	3	3	5	17	60	1	38	9	482	236	59	25	190	176	13	6	27	28	5	4	786	450	134	64	920	514				
88	4	2	3	16	42	3	36	8	545	261	66	14	198	176	18	6	41	30	2	8	863	477	141	49	1,004	526				
99	7	1	—	17	62	—	36	4	566	220	81	14	194	150	12	6	41	43	8	4	899	418	154	38	1,053	456				
1950	6	3	1	22	48	2	34	2	449	210	61	23	166	159	10	8	36	37	4	5	737	411	132	47	869	458				
1951	11	2	2	13	48	—	27	6	449	134	56	15	146	134	11	7	19	48	3	2	711	318	105	39	816	357				
1952	4	—	1	14	76	—	20	4	416	91	46	5	151	130	6	6	30	44	2	3	717	269	96	24	813	293				
1953	7	—	2	17	67	—	28	—	460	67	38	8	143	96	14	7	36	34	4	1	742	198	93	18	835	216				
1954	6	—	2	7	54	—	17	2	406	67	58	8	149	79	13	3	35	42	10	5	672	188	107	21	779	209				
1955	7	—	1	7	54	—	10	1	381	43	44	4	161	55	9	1	21	32	6	4	662	130	77	14	733	144				
1956	9	—	1	4	39	—	4	1	239	18	39	5	132	48	7	2	29	35	1	4	592	101	56	13	648	114				

Tuberculosis (non-respiratory)—new cases notified during 1956—age groups and site

Age groups	LOCATION OF DISEASE															
	Meninges		Miliary		Abdomen		Bones joints		Vertebral column		Lymphatic system		Genito-urinary		Other sites	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0—4	1	2	—	—	—	—	—	—	—	—	—	2	—	—	1	4
5—9	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	—
10—14	—	—	—	—	—	—	1	—	—	1	—	—	—	—	2	—
15—19	—	3	—	—	1	1	—	—	—	1	—	3	—	—	1	8
20—24	—	—	—	—	—	—	2	—	—	—	—	1	—	—	2	5
25—34	1	—	—	—	1	2	2	—	1	2	1	1	—	—	6	9
35—44	—	—	—	—	—	—	1	1	1	—	—	—	1	3	3	5
45—54	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	2
55—64	—	—	—	—	—	—	—	1	—	1	—	1	1	—	1	3
65—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1
Totals ..	2	5	—	—	2	3	8	2	2	6	2	10	2	10	1	37

INCIDENCE AND MORTALITY FROM RESPIRATORY AND NON-RESPIRATORY TUBERCULOSIS 1932 - 1956



Sources of notification of tuberculosis during 1956

Source	Respiratory	Non-respiratory	Totals
Private practitioners	287	8	295
Chest Clinic staff	168	4	172
General hospitals	117	39	156
Mental hospitals	1	1	2
Sanatoria	9	4	13
H.M. Forces	9	—	9
Other sources	1	—	1
Totals	592	56	648

Tuberculosis

Primary notifications and deaths—1956

Classification in municipal wards

Ward	Estimated population	Persons per acre	NOTIFICATIONS						DEATHS (all forms)	
			Respiratory		Non-respiratory		Total all forms	Rate per 1,000 pop.	No. (Manchester figures)	Rate per 1,000 pop.
			M.	F.	M.	F.				
Alexandra Park	21,086	27.02	10	3	1	1	15	0.71	2	0.09
Saints'	17,534	55.66	19	18	1	2	40	2.23	3	0.17
Wick	16,899	33.76	6	4	—	—	10	0.59	3	0.18
Tuley	18,515	13.18	9	12	—	2	23	1.24	3	0.16
Low Moor	15,461	13.75	6	2	—	3	11	0.71	2	0.13
Chill	18,248	17.77	9	8	—	1	18	0.99	5	0.27
Wick	18,707	76.98	14	6	—	1	21	1.12	4	0.21
Ekeley	21,800	17.78	7	10	—	—	17	0.78	4	0.18
dford	22,051	28.56	9	4	—	—	13	0.59	4	0.18
nage	21,603	29.31	10	4	—	1	15	0.69	—	—
etham	13,624	30.56	10	1	—	1	12	0.88	3	0.22
rlton-cum-Hardy	19,706	23.21	11	2	1	1	15	0.76	2	0.10
egiate Church	12,851	25.65	15	5	—	—	20	1.56	6	0.47
mpsall	23,215	12.86	7	6	—	—	13	0.56	2	0.09
sbury	17,506	14.82	3	5	1	—	9	0.51	2	0.11
ton North	22,444	41.56	13	5	1	1	20	0.89	2	0.09
ton South	16,948	26.86	11	3	—	1	15	0.89	5	0.30
purhey	17,532	47.13	11	10	—	1	22	1.25	2	0.11
h Oldham	17,383	34.91	13	10	1	2	26	1.50	2	0.12
enshulme	18,709	30.87	4	4	1	2	11	0.59	4	0.21
ntbowne	19,444	49.86	6	3	—	1	10	0.51	—	—
gsight	14,918	42.02	7	4	—	3	14	0.94	3	0.20
s Plitting	13,835	31.16	5	3	—	2	10	0.72	3	0.22
s Side East	18,183	65.64	10	6	—	2	18	0.99	2	0.11
s Side West	17,345	64.72	14	10	—	1	25	1.44	2	0.12
ton	20,358	17.40	9	6	—	1	16	0.79	2	0.10
Cross	13,053	36.87	11	5	—	1	17	1.30	3	0.23
rton Heath	18,399	20.33	4	2	2	1	9	0.49	5	0.27
rhenden	20,974	11.90	8	11	—	1	20	0.95	4	0.19
Moat	16,827	26.97	14	5	—	—	19	1.13	5	0.30
nshaw	22,005	40.52	7	1	—	1	9	0.41	4	0.18
holme	16,663	22.95	11	5	2	—	18	1.08	2	0.12
George's	17,869	56.00	12	9	3	1	25	1.40	4	0.22
Luke's	17,364	60.50	10	23	1	1	35	2.02	5	0.29
Mark's	20,486	39.62	6	8	1	1	16	0.78	3	0.15
Peter's	10,628	12.70	6	1	1	—	8	0.75	3	0.28
ington	15,314	27.35	3	5	1	—	9	0.59	1	0.07
dhouse Park	20,829	14.60	14	9	1	—	24	1.15	3	0.14
assified	—	—	—	—	—	—	—	—	—	—
CITY OF MANCHESTER ..	686,200	25.18	354	238	19	37	648	0.94	114	0.17

Primary notifications respiratory tuberculosis—1956 Occupation and social classification*

MALES						OCCUPATIONAL GROUP	SINGLE WOMEN					MARRIED WOMEN					Total women	Total both sexes				
Social class					Total		Social class					Social class							Total			
1	2	3	4	5			1	2	3	4	5	1	2	3	4	5						
—	—	—	—	—	—	Fishermen	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Agricultural, horticultural and forestry occupations ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Mining and quarrying occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Workers—non-metallic mining products (not coal) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Coal gas, coke makers, workers in chemical and allied trades ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Workers in metal manufacture, engineering and allied trades ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Textile workers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Tanners, etc., leather goods makers, fur dressers ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Makers of textile goods and articles of dress (not boots, shoes)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Makers of foods, drinks and tobacco	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Workers in wood, cane and cork	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Makers of and workers—paper, paperboard: bookbinders, printers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Makers of products (not elsewhere specified)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Workers in building and contracting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Painters and decorators	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Administrators, directors, managers (not elsewhere specified) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Persons employed in transport and communications ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Commercial finance and insurance occupations (not clerks) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Professional and technical occupations (not clerks)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Persons employed in defence services	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Persons professionally engaged in entertainments and sport ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Persons engaged in personal service (including institutions, clubs, etc.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Clerks, typists, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Warehousemen, storekeepers, packers, bottlers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Stationary engine, crane and tractor drivers, stokers, etc. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Workers in unskilled occupations (not elsewhere specified) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Other and undefined workers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	20	150	40	55	276	Totals	6	45	21	1	73	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Retired	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	No occupations (inmates of institutions, etc.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Infants (0—4 years)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	School children	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Household duties	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Totals	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	314	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Based on the 1950 classification of occupations and social groups used by the Registrar General

Return showing the work of the Manchester Chest Clinic

	Respiratory			Non-respiratory			All forms			Totals
	M.	F.	C.	M.	F.	C.	M.	F.	C.	
Number of patients diagnosed as tuberculous..	356	237	68	2	7	3	358	244	71	673
Number of contacts diagnosed as tuberculous..	—	—	—	—	—	—	3	8	14	25
Number of patients taken off the register as "recovered"	102	68	23	—	1	2	102	69	25	196
Number of cases on the register at 1st January, 1956	2248	1771	372	23	13	13	2271	1784	385	4440
Number of cases on the register at 31st December, 1956	2347	1845	364	24	15	9	2371	1860	373	4604
Number of patients on the register awaiting admission to sanatoria at 31st December, 1956	9	6	—	—	—	—	9	6	—	15

Total attendances	..	..	..	..	..	..	..	..	..	29,806
Total new patients seen	..	..	..	..	..	..	..	..	..	7,809
Total X-rays taken	..	..	..	..	..	..	..	..	..	39,176
Total clinical sessions	..	..	..	..	..	..	..	..	..	1,604

Cases on the notification register at January, 1957

City ward	Respiratory		Total	Non-respiratory		Totals	Grand totals
	Males	Females		Males	Females		
Alexandra Park	70	50	120	8	6	14	134
All Saints'	85	71	156	5	9	14	170
Ardwick	69	54	123	6	8	14	137
Baguley	140	151	291	5	8	13	304
Barlow Moor	52	38	90	—	6	6	96
Benchill	157	143	300	13	15	28	328
Beswick	57	29	86	2	5	7	93
Blackley	91	73	164	5	7	12	176
Bradford	62	61	123	4	4	8	131
Burnage	76	61	137	4	3	7	144
Cheetham	59	31	90	2	3	5	95
Chorlton-cum-Hardy	71	30	101	5	5	10	111
Collegiate Church	65	33	98	3	1	4	102
Crumpsall	81	63	144	5	6	11	155
Didsbury	48	24	72	1	6	7	79
Gorton North	70	42	112	10	4	14	126
Gorton South	61	45	106	7	6	13	119
Harpurhey	61	34	95	2	7	9	104
Hugh Oldham	60	45	105	7	8	15	120
Levenshulme	42	43	85	4	9	13	98
Lighthowne	49	34	83	1	8	9	92
Longsight	62	48	110	6	9	15	125
Miles Platting	29	32	61	3	8	11	72
Moss Side East	82	53	135	5	7	12	147
Moss Side West	70	59	129	8	10	18	147
Moston	58	51	109	5	11	16	125
New Cross	61	37	98	5	3	8	106
Newton Heath	48	42	90	6	8	14	104
Northenden	137	131	268	9	5	14	282
Old Moat	60	53	113	7	3	10	123
Openshaw	71	40	111	7	6	13	124
Rusholme	44	35	79	4	6	10	89
St. George's	61	57	118	3	4	7	125
St. Luke's	67	76	143	5	11	16	159
St. Mark's	77	52	129	6	10	16	145
St. Peter's	33	17	50	3	2	5	55
Withington	36	20	56	2	—	2	58
Woodhouse Park	202	187	389	8	6	14	403
Unclassified	—	—	—	—	—	—	—
Totals—January, 1957 ..	2,724	2,145	4,869	191	243	434	5,303

**Summary of notifications of tuberculosis during the period
1st January to 31st December, 1956, in the City**

Age periods	FORMAL NOTIFICATIONS													
	Number of primary notifications of new cases of tuberculosis													
	0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Totals (all ages)
ry, males	5	4	7	12	11	23	33	48	58	71	57	19	6	354
ry, females	4	3	10	5	11	35	53	53	31	15	9	4	—	238
ratory, males	—	1	—	2	2	1	2	6	3	1	1	—	—	19
ratory, females	1	2	1	—	—	8	5	9	5	2	3	1	—	37

**New cases of tuberculosis coming to the knowledge of the Medical
Officer of Health during the above-mentioned period, otherwise
than by formal notification**

Source of information			NUMBER OF CASES IN AGE GROUPS													
			0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Totals
Returns from 1 registrars	Respiratory	{ M.	—	—	—	—	—	—	—	—	—	3	5	2	1	11 (A)
		{ F.	—	—	—	—	—	—	—	1	—	1	—	—	2	4 (B)
	Non-respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (C)
		{ F.	—	—	—	—	—	—	1	—	—	—	—	1	—	2 (D)
Returns from Registrar General (excludable deaths)	Respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	1	—	—	1 (A)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (B)
	Non-respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (C)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (D)
Spontaneous notifications	Respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (A)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	1	—	1 (B)
	Non-respiratory	{ M.	—	—	—	1	—	—	—	—	—	—	—	—	—	1 (C)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (D)
Transfers " from areas (excluding excludable deaths)	Respiratory	{ M.	—	—	1	—	1	4	12	24	14	4	9	—	—	69 (A)
		{ F.	—	—	—	—	1	2	9	15	4	2	—	—	—	33 (B)
	Non-respiratory	{ M.	—	—	—	—	—	1	—	1	—	—	—	—	—	2 (C)
		{ F.	—	—	—	1	—	—	1	—	—	—	—	—	—	2 (D)
Other sources	Respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (A)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (B)
	Non-respiratory	{ M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (C)
		{ F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (D)

Totals of cases (A) Respiratory, male	81
(B) Respiratory, female	38
(C) Non-respiratory, male	3
(D) Non-respiratory, female	4

Primary notifications—respiratory tuberculosis
Age, incidence and classification of cases seen by chest physicians
(Ministry of Health Circular 83/47 (1).)

Males

Age group	Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total primary notifications
	1	2	3	Total	1	2	3	Total			
Under 1 yr.	5	—	—	5	—	—	—	—	5	—	5
1—2 yrs.	3	1	—	4	—	—	—	—	4	—	4
2—4 yrs.	7	—	—	7	—	—	—	—	7	—	7
5—9 yrs.	6	2	—	8	—	—	—	—	8	4	12
10—14 yrs.	4	4	—	8	—	1	1	2	10	1	11
15—19 yrs.	6	5	—	11	1	7	1	9	20	3	23
20—24 yrs.	5	8	—	13	—	12	2	14	27	6	33
25—34 yrs.	2	11	2	15	4	24	4	32	47	1	48
35—44 yrs.	1	10	3	14	1	26	7	34	48	10	58
45—54 yrs.	1	10	4	15	3	40	4	47	62	9	71
55—64 yrs.	1	8	3	12	2	36	7	39	51	6	57
65— yrs.	—	1	2	3	1	11	7	19	22	3	25
Totals ..	41	60	14	115	12	151	23	186	311	43	354
% 1956	13.2	19.3	4.5	37.0	3.9	48.6	10.6	63.0	100		
% 1955	10.0	18.6	3.5	32.1	4.4	51.9	11.5	67.8	100		

Females

Under 1 yr.	3	—	—	3	—	—	—	—	3	1	4
1—2 yrs.	2	—	—	2	—	—	—	—	2	1	3
2—4 yrs.	8	1	—	9	—	—	—	—	9	1	10
5—9 yrs.	3	—	1	4	—	—	—	—	4	1	5
10—14 yrs.	8	1	1	10	—	1	—	1	11	—	11
15—19 yrs.	10	15	—	25	1	6	—	7	32	3	35
20—24 yrs.	2	21	—	23	1	20	3	24	47	6	53
25—34 yrs.	4	17	1	22	2	23	5	30	52	6	58
35—44 yrs.	2	6	—	8	1	19	2	22	20	1	31
45—54 yrs.	—	4	—	4	1	7	2	10	14	1	15
55—64 yrs.	—	—	—	—	—	3	6	9	9	—	9
65— yrs.	—	1	—	1	—	3	—	3	4	—	4
Totals ..	42	66	3	111	6	82	18	106	217	21	238
% 1956	19.4	30.4	1.4	51.2	2.8	37.8	8.3	48.8	100		
% 1955	19.8	28.5	4.9	53.2	1.9	37.6	7.2	46.8	100		

CLASSIFICATION TABLE—NOTES.

- (1) CLASS A.—Cases in which tubercle bacilli have never been discovered in any exudate, excrement, discharge or sputum.
 CLASS B.—Cases in which tubercle bacilli have been found at any time in any exudate, excrement, discharge or sputum.
 GROUP 1.—Cases with slight constitutional disturbance.
 GROUP 3.—Cases with profound systematic disturbance or constitutional deterioration and with marked impairment of function, either local or general.
 GROUP 2.—All cases which cannot be placed in groups 1 and 3.
- (2) In this column are included cases (a) where death occurred immediately after notification and before the physician had opportunity to see the patient (b) service cases; (c) cases in mental hospitals, etc., etc.

EPILEPSY AND CEREBRAL PALSY

Children between the ages of 2 and 16 suffering from these conditions and brought to the notice of the Department are referred to the School Health Service in accordance with Section 34 of the Education Act, 1944. During the year 1956 15 cases of epilepsy and 16 cases of cerebral palsy were referred. All were under the age of five years.

The following statement relates to epileptic and spastic children known to School Health Services:—

Epilepsy—

Children in Soss Moss Residential School	52
Children attending ordinary schools but under supervision	75

Cerebral palsy—

Children in Margaret Barclay Residential School.....	20
Children in Lancasterian Day Special School	70
Children under orthopaedic treatment at clinics.....	34
Children in residential school not administered by Education Committee	1

The figures relate to children found to be suffering from the two defects and do not necessarily indicate the incidence of either disease in the City as either condition is notifiable. There may be, for example, children suffering from severe or slight epilepsy or birth injury that may never have been brought to the notice of the Department, particularly children over 10 years of age.

Residential provision for sane epileptics aged 15 years or over, of both sexes, is made under the terms of Part III, National Assistance Act, 1948, at the Corporation's Langho Colony for sane epileptics. Details of the accommodation and facilities provided at this establishment are given elsewhere in the report.

HOME NURSING SERVICE

Every year since the introduction of the National Health Service in July, 1948 there has been an increase in the number of patients being nursed at home and the number of nursing visits paid to them. As the following figures show, the patients on the nurses' books at 31st December, 1956 totalled 2,819—an increase of 153, or 5·7 per cent., compared with the position at the same date in the previous year. The total of nursing visits, 365,667, is also a record, but the percentage increase, 1·1 per cent., is lower than for patients.

For the first time in eight years, however, the number of new patients referred to home nursing has fallen—13,320 as against 14,437, a substantial decrease of 7·6 per cent. It is the lowest total since 1952 and might suggest that the limit of new patients has now been reached. It is interesting to note that despite this substantial fall in new patients, the number of patients on the nurses' books continues to rise, so that the volume of nursing work may well continue its upward trend.

The home nursing service continues to be dominated by two factors. First, the giving of injections of penicillin, streptomycin, mersalyl, insulin, cytamen, and other antibiotics. Second, the nursing care of the aged. Injections are given to some three-fifths of all patients and altogether account for about 50 per cent. of the nurses' time. The practice of passing subcutaneous and intramuscular injections to the district nurse varies from doctor to doctor, some deputing practically all this work to the nurse, others handling most of it themselves. It should be noted that although in many cases the administration

of an injection constitutes the sole reason for the nurse visiting the patient, other cases, for instance with tuberculosis patients and the aged, other nursing care is required in addition. The administration of injections has grown markedly during the past ten years and is one of the reasons for the substantial increase in the volume of nursing work.

In explanation of this trend, three particular instances may be cited: tuberculosis, heart diseases and anaemia. The increased nursing care of tuberculosis patients at home has been a striking development in district nursing since 1948. In 1949 new cases referred for home nursing totalled 108 (0.8 per cent.). In 1955 the total had risen to 873 (6.0 per cent.), and although there was a substantial decline in 1956 (624 patients or 4.7 per cent.) the nursing of this particular class of patient still represents a large part of the daily routine of the district nurse. At 31st December, 1953, 1 in 20 patients being nursed at home were suffering from tuberculosis. Three years later the proportion had risen to 1 in 14 patients. The home care of a tuberculosis patient frequently necessitates a daily visit for several months. Thus during 1956 the nursing of these patients required 49,582 visits, 13.6 per cent., compared with only 8.1 per cent. three years before. It will be interesting to observe if last year's downward trend in cases referred for home nursing will be maintained. The second example—patients suffering from anaemia, shows an increase from 162 new patients in 1951 (1.7 per cent.) to 458 new patients in 1956 (3.4 per cent.). The third example—heart diseases, shows an increasing incidence from 9.5 per cent. in 1951 to 12.2 per cent. in 1956. Practically all these patients are receiving a periodical injection and in only a few cases is other nursing care given as well.

An unusual aspect of the growth in injection therapy is that a number of patients referred to the district nurse are ambulant and at work—mainly tuberculosis and anaemia patients. In most cases it is arranged for the patient to call at the local district nursing centre after work in the evenings in order to receive their injections. In this way the nurses' work is lightened. At the close of the year some 70 patients were receiving injections in this manner.

The nursing care of the aged has always been an important part of the district nurse's work and with the gradual rise in the average age of the population and in the expectation of life, particularly of females, there seems every likelihood of its volume increasing still further. Of the 2,819 patients on the books at 31st December, 1956, 1,605 (57 per cent.) were aged 65 and over. It is perhaps not surprising that this percentage is not higher, until it is realised that many patients are on the nurse's books to receive a daily, bi-weekly, or weekly injection, and such patients, especially those suffering from tuberculosis or anaemia, are preponderantly in the middle age group. Of the new cases referred for home nursing during 1956 nearly one-fifth were over the age of 75, mostly females, and two-fifths aged 65 and over. Moreover when an aged patient comes on to the district nurse's books she frequently stays on until she is transferred to hospital or dies. Time spent on the nursing of aged patients is on the whole greater than that spent nursing patients in the middle age group who, as previously explained, for the most part require injections only.

	1956	1955	Per cent. increase on 1955	Per cent. increase on 1955
Patients on books 1st January ..	2,666	2,366	12.7	3.4
Add—new patients	13,320	14,437	-7.7	1.4
Total patients nursed ..	15,986	16,803	-4.9	1.0
Deduct—patients taken off books	13,167	14,137	—	—
Patients on books 31st December	2,819	2,666	5.7	2.1
Nursing visits	365,667	361,749	1.1	1.1

Classification of patients and nursing visits

A Patients nursed—

	1956	Per cent.	1955	Per cent.
Medical	13,368	83·6	13,825	82·3
Surgical	1,445	9·0	1,617	9·6
Infectious diseases	41	0·3	68	0·4
Tuberculosis	872	5·5	1,052	6·3
Maternal complications	260	1·6	239	1·4
Other	—	—	2	—
Totals	15,986	100·0	16,803	100·0

B Nursing visits—

	1956	Per cent.	1955	Per cent.
Medical	274,848	75·2	263,960	73·0
Surgical	38,951	10·7	42,398	11·7
Infectious diseases	495	0·1	1,960	0·5
Tuberculosis	49,582	13·6	51,348	14·2
Maternal complications	1,791	0·5	2,007	0·6
Other	—	—	76	—
Totals	365,667	100·0	361,749	100·0

Classification of new patients referred to the Home Nursing Service during the year

A Diagnosis—

	1956	Per cent.	1955	Per cent.	1954 Per cent.	1953 Per cent.
Infectious and notifiable diseases :						
(a) Influenza	24	0·2	45	0·3	0·4	0·8
(b) Primary pneumonia	363	2·7	412	2·8	3·3	4·1
(c) Bronchopneumonia	199	1·5	220	1·5	1·6	1·7
(d) Measles	6	0·1	14	0·1	0·1	0·1
(e) Whooping cough	5	—	26	0·2	0·1	0·1
(f) Pulmonary tuberculosis	579	4·3	817	5·7	4·5	4·0
(g) Non-pulmonary tuberculosis	45	0·3	56	0·4	0·5	0·3
(h) Erysipelas	12	0·1	16	0·1	0·1	0·2
(i) Other notifiable diseases	11	0·1	8	0·1	0·1	0·2
Totals of (1)	1,244	9·3	1,614	11·2	10·7	11·5
Diabetes	185	1·4	228	1·6	1·6	1·4
Anaemias	458	3·4	300	2·0	1·9	2·0
Bronchitis	1,152	8·7	1,277	8·9	8·3	9·8
Other respiratory diseases	595	4·5	633	4·4	3·2	4·1
Heart diseases	1,618	12·2	1,656	11·5	10·5	8·4
Cancer	607	4·6	569	3·9	3·9	4·7
Diseases of the circulatory system ..	341	2·6	340	2·3	2·3	2·6
Diseases of the nervous system	86	0·7	80	0·6	0·7	0·9
Urogenital	94	0·7	115	0·8	0·7	0·8
Complication of pregnancy	64	0·5	35	0·2	0·4	0·4
Complication following childbirth ..	186	1·4	202	1·4	1·3	1·6
Other medical cases	5,451	40·9	5,996	41·6	43·9	37·8
Post-operative	513	3·9	580	4·0	4·0	4·2
Varicose ulcers	147	1·1	142	1·0	1·2	1·1
Other surgical	575	4·3	658	4·5	5·3	9·4
Operations	4	—	12	0·1	0·1	0·1
Totals	13,320	100·0	14,437	100·0	100·0	100·0

B Age groups—

Age group	1956	Per cent.	1955	Per cent.	1954 Per cent.	1948 Per cent.
0—4	601	4.5	796	5.5	6.1	8.2
5—14	531	4.0	658	4.6	6.4	5.1
15—64	6,835	51.3	7,471	51.8	51.1	49.0
65—74	2,804	21.1	2,947	20.4	20.0	} 37.7
75 and over	2,549	19.1	2,565	17.7	16.4	
Totals	13,320	100.0	14,437	100.0	100.0	100.0

Nursing staff

The average number of district nurses at work during 1956 was 100½, of whom 78½ were whole-time and 22 part-time, giving an equivalent whole-time strength of 89.

This figure of 89 is analysed into :—

(a) Nursing grades—

	1956	1955	At 31-12-
Queen's Senior Superintendent	1	1	1
Queen's superintendents	4	4	4
Queen's assistant superintendents	1½	2	2
Queen's district nurse tutor	1	1	1
Queen's female nurses	38	33	39
Queen's male nurses	9	8½	10
Student district nurses	5	6	5
State-registered nurses	25½	24	24
State-enrolled assistant nurses	3½	5	4
	<u>89</u>	<u>84½</u>	<u>90</u>

(b) Accommodation—

	1956	1955
Resident in district nurses' home or centre under control of a superintendent	19	23
Non-resident, but working from nurses' home or centre under control of a superintendent	63	55½
Operating on "single" or "double" districts under ultimate control of a superintendent	7	6
	<u>89</u>	<u>84½</u>

Training

The Institution decided to discontinue training at the Hulme Home during the year. State-registered nurses are now trained in district nursing at Ardwick and Harpurhey training homes. During 1956, 12 Manchester students (6 taking the full six-months training and 6 the abridged four-months training) were trained, in addition to 2 students trained on behalf of the Cheshire and Shropshire County Health Authorities. All students sat for the Queen's examination and passed successfully. The four-weeks lecture block organized by the Institution was attended by 30 other students from Bolton, Bury, Rochdale, Salford and Huddersfield.

Transport

At 31st December, 1956, there were in use on the district 25 motor cars, 3 motor cycles, and 9 power-assisted cycles (the comparable figures for 1955 being 18, 5 and 5 respectively). Of the cars, 7 are the property of the Institution, 4 the property of the Corporation, and 14 are owned by nurses who claim travelling allowance for their use on the district. Of the 100 nurses at work at the close of the year 37 made use of mechanized transport, most of the remainder using bicycles; a few used public transport and walked.

ickroom equipment loans service

This service operated by the Institution in conjunction with the British Red Cross Society makes available the following articles for loan to patients—rings ; bed bottles ; bed cradles ; bed-pans ; back rests ; bed-tables ; feeding cups ; rubber sheets ; bed-linen (in emergency cases) ; lifting pole stands ; special type beds ; air-beds ; commodes ; walking aids and crutches.

A small weekly hire charge is levied in respect of some of the more expensive articles, but this is waived where it would inflict hardship. The district nursing centres loan out equipment only to persons being nursed by them. Other patients must apply to the Red Cross depots. Red Cross depots are open at certain times of the day in Chorlton-on-Medlock, Crumpsall, Didsbury, Newton Heath, Openshaw, Whalley Range and Baguley, and at the University Settlement in Every Street, Ancoats. Addresses and times of opening are available from the Red Cross Headquarters, 3, The Parsonage, Manchester, 3.

DARBISHIRE HOUSE HEALTH CENTRE

Darbishire House is an experimental health centre and it is the object of the centre to provide:—

1. First-class medical care for the inhabitants of a densely populated area.
2. The integration of the preventive and curative services of the local authority, the family practitioner and the hospital-specialist services.
3. Undergraduate medical education to leaven the present emphasis given to hospital medicine.
4. To show how medical care can take into account the social factors in the causation of disease in the individual and in the community.

The building is situated in Upper Brook Street, Chorlton-on-Medlock, Manchester, 13 and has been adapted to provide accommodation for four general practitioners, together with ancillary services, a maternity and child welfare clinic and a school health clinic. The practitioner service commenced at the centre on the 1st April, 1954; sessions at the maternity and child welfare clinic consisting of two infant and two ante-natal sessions weekly commenced April, 1955.

The centre is administered through the University of Manchester by a Board of Management.

The cost of purchasing, adapting and equipping the centre was met by monies subscribed by the Nuffield Provincial Hospitals Trust and the Rockefeller Foundation.

The research and teaching expenses are met by the University, and an annual grant is made by the Manchester City Council towards the cost of the centre in addition to meeting the expenditure incurred in staffing the maternity and child welfare and school health clinics.

There are five nurses employed at the centre, two whole-time and three part-time. One of the nurses is a Queen's district nurse, the remainder are state-registered nurses. The cost of providing one of the nurses is met by the Home Nursing Service. Their attendance during surgeries has continued to prove one of the great advantages of practice at the centre as has their availability for home nursing in the bulk of the medical practitioners' practices, which lie within a radius of about one mile of the centre. The difficulty of meeting morning and evening surgery commitments together with home nursing is overcome by employing part-time nurses, mainly to work in the treatment room but available for the district when necessary.

The population covered by the centre is about 14,000.

The Department has co-operated fully with the University and the Centre in endeavouring to attain the objects for which the centre was provided and the joint efforts of all concerned point to a future co-ordination of medical service with benefit to the community at large.

Particulars of attendances, etc. are shown elsewhere in this report.

CONVALESCENCE

There has been a further increase during the year of patients admitted to convalescent homes as compared with the previous year, namely, 369 in 1955 and 404 in 1956.

Particulars of the numbers of admissions to the various convalescent homes are shown below:—

West Hill Convalescent Home, Southport	291
Blackburn & District Convalescent Home, St. Annes	28
"Binswood" British Red Cross Home, Manchester	60
Jewish Blind Society's Homes, Cliftonville	6
Hillary Nursery Home, Prestatyn (children)	13
Sefton House, Birkenhead (children)	2
"Beachways," Southport	3
"Broomgrove," Liverpool (children)	1
Total	404

The main source of recommendations for convalescence were from patients' medical attendants but a number were referred by hospital almoners in respect of patients discharged from hospital or attending out-patient departments.

In addition to the above, beds for convalescent mothers are provided at Knowle House, Handforth, and children are admitted to the Dr. Gar Memorial Home, Conway, North Wales.

Information relating to these homes is given elsewhere in this report.

HOME HELP SERVICE

During the period under review an expansion of the service was undertaken and the establishment increased from 60 full-time female employees working 44 hours per week to 100 full-time workers, and 50 part-time female employees, the latter working a 22-hour week.

The actual number of full-time helps recruited during 1956 was 24 but 5 resigned from the service which gives an average figure of 79 full-time workers employed during the year. Part-time helps recruited totalled 56 and of these 14 resigned, giving a figure of 40 part-time workers employed during the year.

During the recruiting of staff a total of 309 applicants for the position of home helps were interviewed. Although advertisements in the newspapers produced a great number of applicants it was only by careful selection that the right type of person for the work of a home help was found and finally appointed, and this accounts for the fact that only a small proportion of those interviewed were finally selected.

The greater use of part-time workers has been fully justified as in so many cases part-time help in a morning is the ideal solution for many sick persons needing the services of a home help. The majority of the part-time helps and the full-time helps attend at two or three cases of sickness, old age and infirmity each week, but in confinement cases, full-time assistance is always provided as much as this has proved to be inadequate. The average length of time spent on each case was 3 weeks compared with 2½ weeks in 1955, although in certain cases assistance was provided for much longer periods.

Contributions towards the cost of the service are recovered from householders and such contributions are assessed according to scales authorised by the City Council.

Co-ordination of the service is effected by the Organizer who visits persons receiving help, supervises the work of the helps and allocates their duties to them, deals with all case work and exercises supervision over the administrative work of the Section. During 1956 a total of 991 visits were made by the organizer. An Assistant Organizer was appointed in January, 1956 but resigned in October and her successor was appointed in December, 1956.

The demands upon the service have increased and applications totalled 2,043 in 1956 as compared with 1,657 in 1955. The number 2,043 is made up of 1,743 cases where confinements were expected and 1,500 cases where the householders were suffering from sickness, old age or infirmity.

The sources of application in 1956 are shown in the attached table.

The sources of application for the services of home helps

Source	Number in cases following confinement		Number in cases of sickness, old age, etc.		Totals	
	1956	1955	1956	1955	1956	1955
Personal application by letter, telephone, or visit to the office by applicant or a representative ..	360	274	704	570	1,064	844
Old welfare centres, health visitors, or midwives	177	143	174	156	351	299
Hospital almoners	5	8	210	195	215	203
Medical practitioners	1	1	199	138	200	139
Tuberculosis Centre	—	—	3	8	3	8
District Nursing Association	—	—	64	22	64	22
Welfare Services Department	—	—	32	61	32	61
National Assistance Board	—	—	62	35	62	35
Popples Aid Society	—	—	3	2	3	2
Land Aid Society	—	—	20	11	20	11
Ward councillors	—	—	19	10	19	10
Mental Health Section	—	—	3	9	3	9
Children's Department	—	—	5	5	5	5
Council of Social Service	—	—	2	9	2	9
Totals	543	426	1,500	1,231	2,043	1,657

The total number of households assisted by home helps was 2,266 of which 1,047 were in homes where a confinement had taken place, and 1,047 where there were persons suffering from sickness, old age and infirmity. Of the latter number, 446 households were assisted on more than one occasion and 601 were provided with a help on only one occasion. When a comparison is made between these figures and those of 1955 when the applications were 1,657 and the cases attended were 1,743, an increase of 386 applications and 523 attendances is a clear indication of how greatly the expansion of the service was required,

The increased number of home helps employed and the rise in application for help and in case work have considerably increased the administrative work of the service which may be expected in a service which is expanding. Even so, despite the employment of a greater number of home helps it is only by careful deployment of the helps available and also by their willingness to accept as much work as it is possible for them to do efficiently that help has been given in so many cases.

The attached table gives full details of the increase in the service which has taken place during the last five years.

	1952	1953	1954	1955	1956
Average number of helps employed: Full-time	60	64	67	68	79
Part-time	—	—	—	13.5	40
Types of cases attended—	1952	1953	1954	1955	1956
Confinement cases	F.T. 173 177	F.T. 102 166	F.T. 127 211	F.T. 66 311	F.T. 70
Sickness cases and those of	P.T. 851	P.T. 1,073	P.T. 1,160	P.T. 1,366	P.T. 1,866
old age and infirmity	— 1,024	— 1,175	— 1,287	— 1,432	— 1,866
Totals	1,201	1,341	1,498	1,743	2,100

FAMILY WELFARE SERVICE

The Family Welfare Service was started in Manchester in 1948 and aims are:—

- to deal with adolescent problems and difficulties;
- to strengthen the ideas of responsibilities of the home by seeking to prevent the break-up of marriage and the alienation of children from their parents, and
- to promote the adjustment of unhappy childless marriages.

The Service is directed by Lady Gertrude Jefferson, M.R.C.S., D.P.M., who is assisted by doctors and a social worker, all with psychiatric experience. Each applicant is interviewed by a doctor but no physical examinations are made.

Sessions are held at two maternity and child welfare centres on Wednesday and Thursday afternoons, and a session is held on Monday evenings at the Darbishire House Health Centre.

An annual grant is made to this Service by the City Council under powers conferred by Section 28 of the National Health Service Act, 1946.

The Medical Officer of Health is indebted to Lady Gertrude Jefferson for the following report:—

“A survey of the work of the Family Welfare Service for the year ended December, 1956, brings out several interesting features.

We were working to capacity in 1954, and when in 1955, following the move to Darbishire House for the Monday evening session, and a press notice about it, the influx of new cases, many of them unsuitable, was overwhelming. However, thanks to the generous grant from the Nuffield Provincial Hospitals Trust, we were able to get more secretarial and receptionist help, which freed our psychiatric social worker for interview work in which she is fully experienced and most successful. In addition, our fourth doctor now receiving some remuneration has been able to give more time to us. In this way the work has been stabilised.

The actual number of new cases during the year fell to a more manageable level, though the number of names on our books remained the same, as some were carried over from the previous year. The number of interviews, however (as shown in the figures given) rose very markedly. This has meant that when necessary, cases have been seen at more frequent intervals with corresponding good results.

INTERVIEWS

	1956	1955	1954
Darbishire House	1,030	952	779
Yew Tree Lane	435	408	319
Withington	415	394	260
Totals	<u>1,880</u>	<u>1,754</u>	<u>1,358</u>

NEW CASES

	1956	1955	1954
Darbishire House	178	188	128
Yew Tree Lane	81	106	64
Withington	68	81	39
Totals	<u>327</u>	<u>375</u>	<u>231</u>

Total number of applicants attending all centres:—

1956 .. 486 1955 .. 447 1954 .. 337

Our link with health visitors at Wythenshawe and Withington continues to be most helpful, and the health visitors generally, frequently refer cases to us. There is a growing interest in our work shown by the health visitors at Darbishire House, who have asked our psychiatric social worker (Mrs. Ward) to meet them and discuss the development of further co-operation. This is very satisfactory, especially as the doctors in Darbishire House also show appreciation of our work.

Gradually more young people are coming to us but we should welcome an increase in the true adolescent group. We get many difficult cases referred from various sources, who although they are time consuming, and may have to attend over a considerable period, are well worth the time spent on them. The cases of marital disharmony are most satisfactorily dealt with when both husband and wife are willing to attend, and this fortunately happens frequently.

The work is growing at all the centres, which would seem clearly to indicate a continued need of the kind of constructive direction in family and individual problems we are able to give. At the present rate of growth further developments will soon be called for but will need further financial support even if the Nuffield grant continues. This grant was made for three years, and we shall receive our last payment in the summer of this year. We have had no indication of the continuance of the grant. Without it the work cannot go on unless some other source of income becomes available."

VENEREAL DISEASES

Treatment for venereal diseases in mothers and young children was continued in May, 1955, at the two centres formerly used for the purpose but follow-up visits are still paid, on request, by health visitors, to defaulters from the V.D. Clinics in the City.

22 primary and 29 subsequent visits were paid in 1956.

On 1st July, 1956, a health visitor was seconded to the Regional Hospital at Ard as contact tracer in the field of venereal diseases.

Good results have been obtained from the follow up of defaulters, and it has been possible to help with social problems in the clinics.

It is too early to quote any figures at this stage as a 12 month period is not completed until July, 1957.

Sanitary Services Division

INTRODUCTION

WATER SUPPLY

FOOD SUPPLY:

- Hygiene
- Milk and ice cream control
- Adulteration
- Meat (Markets Department)

SMOKE PREVENTION:

- Industrial
- Prior approval of the installation of furnaces
- Smokeless zones
- Recording of atmospheric pollution

HOUSING CONDITIONS:

- Clearance areas
- Re-housing: medical circumstances
- Abatement of overcrowding
- Houses let-in-lodgings
- Repairs
- Certificates of disrepair
- Improvements or conversion grants
- Common lodging-houses
- Caravan dwellings
- Canal boats

OCCUPATIONAL CONDITIONS:

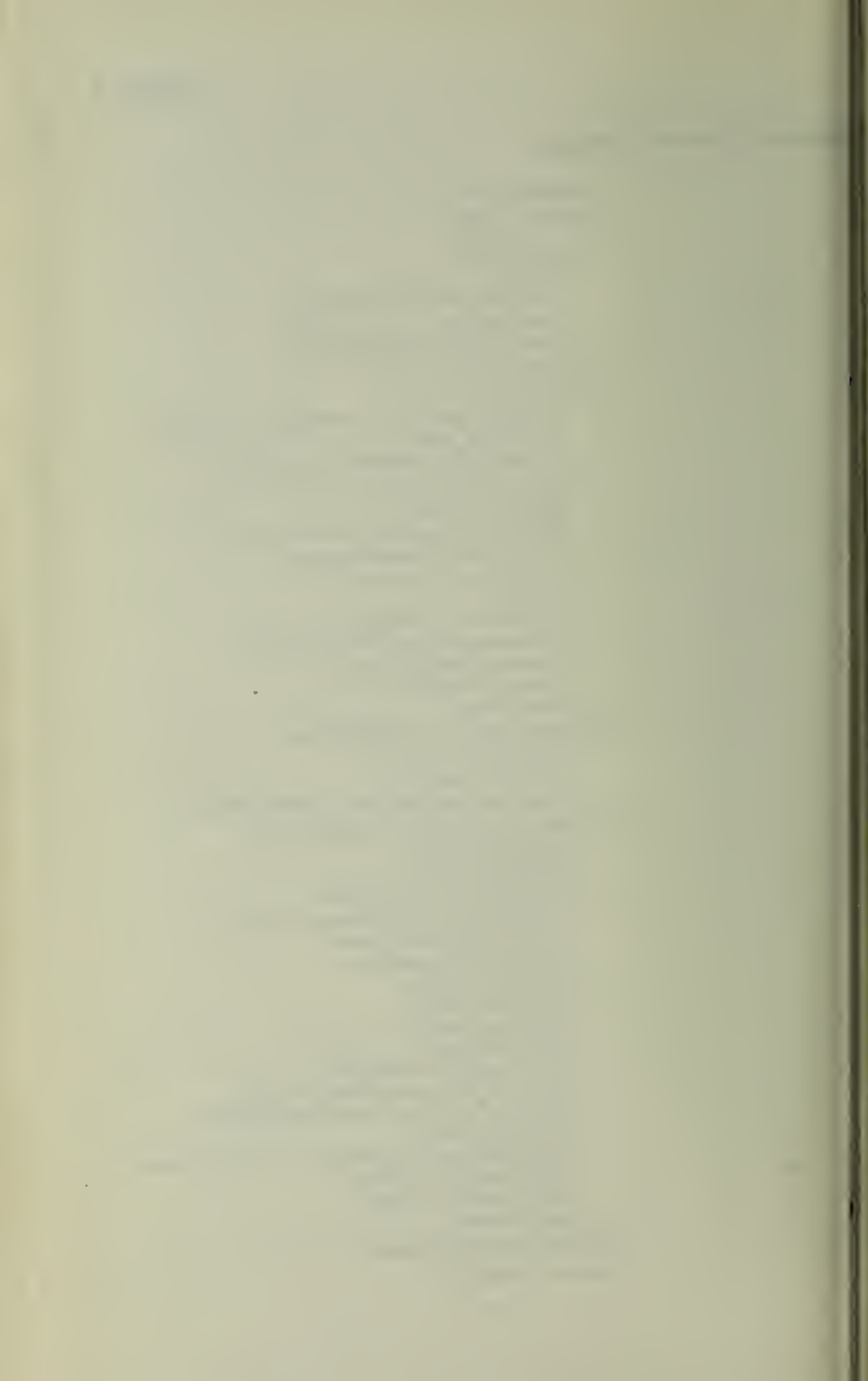
- Factories
- Factory outworkers
- Shops and employment of young persons

GENERAL SANITARY CONDITIONS:

- Infectious diseases
- Rodent control
- Eradication of insect pests
- Drainage works (defects and repairs)
- Choked drains and sewers
- Sanitary accommodation
- Disposal of refuse
- Offensive trades
- Effluvium nuisances
- Noise nuisance
- Land used for pleasure fairs
- Rag flock and other filling materials
- Export of rags and second-hand clothing
- Swimming baths
- Establishments for massage or special treatment
- Hairdressers or barbers
- Sale of certain poisons
- Exhumations

PUBLIC CONVENIENCES

PUBLIC ANALYST



SANITARY SERVICES DIVISION

J. Graham, F.A.P.H.I., M.R.S.H., Chief Public Health Inspector

More legislation of importance to the duties of the Division was enacted during the year whilst other contemplated changes, with a bearing on duties dealing with housing and occupational conditions, were published.

The importance of food hygiene in protecting health was fully recognised by regulations which became operative in part on the 1st January and in full on the 1st July. Similarly, the essential need for clean air, expressed by the Beaver Committee as an objective in its own right irrespective of fuel efficiency was recognised in the Clean Air Act approved on the 5th July and which is likely to become fully operative early in 1958.

On other environmental issues local experience of the inadequacy of pre-existing legislation to meet particular local conditions resulted in the Corporation successfully seeking special powers to require the restoration of water supplies to houses and to prohibit the use of unsuitable sites by caravan etc., dwellers. These powers are included in the Manchester Corporation Act, 1956.

The Rent Bill proposes changes which are likely to have a considerable impact on the inspectors' work while the Shops Bill's provisions, apart from those on evening closing hours, also deal with existing duties of the Department.

Deficiencies in the number of inspectors continued to be a serious handicap to the effective performance of all the duties of the division. The particular difficulties were recognised by the appropriate Provincial and National Whitley Councils in the granting of a special salary allowance additional to the industrial fighting. This did exercise a useful retaining influence, although some further rises have occurred. Here it is appropriate to record appreciation of the work of the staff in dealing with the heavy incidence of duties especially in relation to unfit and substandard housing.

The Department's special establishment of student inspectors was increased from 6 to a total of 12, all in attendance at the "sandwich" course for student public health inspectors at Salford Royal Technical College. This increased attention to training facilities is in full accord with the findings of the working party set up by the Ministry of Health to report on the recruitment, training and qualification of sanitary inspectors.

The working party also dealt with the designation of sanitary inspector and finding that the word "sanitary" had become a misnomer in relation to the scope of the inspector's duties recommended the adoption of the title of public health inspector. This was implemented during the year in the Sanitary Inspectors (Change of Designation) Act.

Inspections and visits

Water

To obtain samples of water for chemical and bacteriological examination	11
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Food supply

Restaurants and snack bars	60
Factory canteens	9
Bakehouses	15
Food preparation premises	12
Markets re sale of food	3
Shops re sale of food	87
Hotels, beerhouses	27
Hawkers of food and storage premises	9
Dairies and milk shops for milk samples	24
Shops for other food and drugs samples	46
Observations at shops, markets, etc. re sampling	110
Farms : "Appeal to Cow " samples, etc.	3
Dairies and milk distribution premises	27
Pasteurizing and sterilizing plants	226
Hospitals, schools and day nurseries	31
Shops selling bottled milk	18
Imitation cream premises	4
Premises used for the manufacture of ice cream	47
Premises used for the sale of ice cream	7

Smoke abatement

Works, etc.	23
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Housing conditions

Primary inspections of dwelling-houses under the Public Health Act, 1936	156
Subsequent inspections of dwelling-houses under the Public Health Act, 1936	290
Primary inspections of dwelling-houses under the Housing Act, 1936	27
Subsequent inspections of dwelling-houses under the Housing Act, 1936	26
Overcrowding.. .. .	
Re-housing and medical cases	22
Applications for improvement grants.. .. .	1
Houses let-in-lodgings	2
Common lodging houses	
Caravan dwellings	4
Canal boats	2
Supervision of work in default	62

Occupational conditions

Homes of outworkers	289
Factories	890
Shops re Shops Act	1622
Other business premises	1497

Infectious diseases

Primary visits after notification	1739
Subsequent visits	149
Contacts	143
Food poisoning	293

General sanitary conditions

Hospitals, institutions, nursing homes and agencies	108
Rat infestation	1177
Refuse tips	134
Verminous premises	90
Offensive trades	28
Effluvium nuisances	686
Noise	230
Rag flock and other filling materials	59
Export of washed rags and second-hand clothing	32
Swimming baths	85
Establishments for massage or special treatment	115
Hairdressers and barbers shops—Manchester Corporation Act, 1950	96
Sale of certain poisons—Pharmacy and Poisons Act, 1933	124
Exhumations	4
Infirm persons	18
Cinemas, theatres, dance and billiard halls	38
Land used for pleasure fairs	30
Premises for the purpose of examination of drains	275
Rag and bone dealers' barrows	3
Land, refuse deposits, etc.	471
Cesspools, pailclosets, etc.	20
Water courses	55
Streets, passages, roadways and footpaths	997
Railway stations	11
Stables	22
Piggeries	6
Slaughterhouses	2
Sanitary accommodation etc., at schools, churches.. .. .	38
Sanitary accommodation, etc., at parks	22
Public sanitary conveniences	21
Miscellaneous	15835

WATER SUPPLY

Water supply for the City is derived from three sources. Thirlmere and Haweswater in the Lake District, and reservoirs in the Longdendale Valley to 20 miles east of Manchester. The average daily consumption of water in Manchester is approximately 90 million gallons of which 36 million gallons are derived from Thirlmere, 33 million gallons from Haweswater and the remainder from Longdendale.

Distribution is effected by means of 7 service reservoirs and by trunk mains, whilst 10 booster stations are used for maintaining pressure in higher areas.

42 complaints were received during the year—all from occupiers drawing their supply from the Longdendale gathering grounds. 26 of these complaints were during the month of September, when following flood damage on the watercourses at Longdendale, severe discolouration of the water supply from that source took place. Many complaints were also received by the Waterwork Department, and a letter of explanation was sent by that Department to all complainants whilst the Chairman of the Waterworks Committee made a statement to assure the public that special precautions had been taken and although discoloured the supply was perfectly safe for all domestic and dietetic purposes. Public health inspectors took 46 samples for bacteriological examination, and 27 for chemical analysis from 42 different premises including dwelling houses, dairies, factories, workshops, shops, schools and hospitals. 38 of the 46 samples bacteriologically examined were found not to contain any coliform organisms, and of the remainder 6 contained non-faecal coli, 1 faecal coli and 1 both faecal and non-faecal coli, as shown in the accompanying tabular statement. Further samples examined in respect of each of the unsatisfactory samples, gave satisfactory results. The Engineer and Manager of the Waterwork Department was informed of the results of all the examinations.

District	No. of samples	Samples free from coliform bacteria	Faecal coli found		Non-faecal coli found		Service reservoir or aqueduct	Source
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.		
Ancoats	1	1	—	—	—	—	Audenshaw and Denton	Longdendale
Ardwick	2	1	—	—	1	1	Audenshaw and Denton	Longdendale
Blackley	1	1	—	—	—	—	Heaton Park	Haweswater
Bradford	1	—	—	—	1	2	Godley	Longdendale
Burnage	1	1	—	—	—	—	Audenshaw and Denton	Longdendale
Cheetham	1	1	—	—	—	—	Godley	Longdendale
Chorlton-on-Medlock ..	2	2	—	—	—	—	Audenshaw and Denton	Longdendale
Clayton	1	1	—	—	—	—	Godley	Longdendale
Crumpsall	1	1	—	—	—	—	Heaton Park	Haweswater
Fallowfield	1	1	—	—	—	—	Audenshaw and Denton	Longdendale
Gorton	3	3	—	—	—	—	Audenshaw and Denton	Longdendale
Hulme	2	1	—	—	1	1	Audenshaw and Denton	Longdendale
Levenshulme ..	2	2	—	—	—	—	Audenshaw and Denton	Longdendale
Longsight	3	2	—	—	1	7	Audenshaw and Denton	Longdendale
Miles Platting ..	5	4	†1	3	†1	5	Godley	Longdendale
Moston	1	1	—	—	—	—	Godley	Longdendale
Newton	3	1	1	3	1	2	Godley	Longdendale
Newton Heath ..	6	5	—	—	1	1	Godley	Longdendale
Openshaw	2	2	—	—	—	—	Godley	Longdendale
Rusholme	2	2	—	—	—	—	Audenshaw and Denton	Longdendale
West Gorton ..	1	1	—	—	—	—	Audenshaw and Denton	Longdendale
Whalley Range ..	2	2	—	—	—	—	Audenshaw and Denton	Longdendale
Withington ..	1	1	—	—	—	—	Audenshaw and Denton	Longdendale
Wythenshawe ..	1	1	—	—	—	—	Off Thirlmere Aqueduct	Thirlmere

† One sample contained both faecal and non-faecal coli.

Complaints were received from occupiers and also from the Manchester Corporation Waterworks Department on the absence of water supply or an adequate supply to dwelling-houses. In many cases the conditions arose from unknown persons removing piping from adjoining unoccupied premises. Notices were served under Section 138 of the Public Health Act, 1936, and Section 30 of the Water Act, 1945 requiring owners to provide a sufficient supply of water in respect of 125 houses.

In the experience of the Department these provisions failed to meet the need for prompt restoration of supplies which have most frequently been cut off by vandalism, and by the theft of lead waterpipes. Accordingly the Corporation successfully sought further powers to remedy this matter, and these are now available through Section 25 of the Manchester Corporation Act, 1956.

Concerning Manchester's water supply, the Engineer and Manager of the Waterworks Department has supplied the following information:—

The water supply has been satisfactory both in quality and quantity.

Regular samples are taken for bacteriological examination of the raw water and of the treated water going into supply. Out of 827 samples examined in 1956, 727 were found to be free from coliform bacteria. Typical chemical analyses of the sources of supply are attached.

The Thirlmere and Longdendale supplies are treated with hydrated lime. This has proved effective in limiting the maximum lead content found in samples, given overnight contact with lead service pipes, to less than 0.2 p.p.m. Pb. which is considered very satisfactory.

It has proved impracticable to prevent access of seagulls to the large service reservoirs, but pollution from this source is dealt with by chlorination at the outlets of the reservoirs.

TYPICAL ANALYSES

January to December, 1956

THIRLMERE AND HAWESWATER LAKES

The supply from these lakes is subject only to slight variations and the following analyses are typical:—

	Thirlmere	Haweswater
pH value	6.0	6.8
Colour as p.p.m. platinum	12	9
Turbidity p.p.m. silica scale	2.5	2.0
<i>Parts per million</i>		
Total solids dried at 180°C.	30	32
Free acidity as CO ₂	4	2
Alkalinity as CaCO ₃	5	8
Total hardness as CaCO ₃	11	16
Chlorides as Cl ₂	7	7
Nitrates as N ₂	0.17	0.14
Ammoniacal nitrogen as N ₂	0.02	0.01
Albuminoid nitrogen as N ₂	0.03	0.04
Oxygen absorbed test, 4 hours at 27°C.	0.78	0.57
Silica as SiO ₂	2.5	1.5
Iron as Fe	0.06	0.12
Manganese as Mn	nil	0.03

The water leaving Thirlmere lake is treated with hydrated lime to correct the pH value and sterilised with chloramine. It is again treated with chloramine before it enters the Manchester area of supply.

The water from Haweswater lake is sterilized by treatment with chlorine.

THIRLMERE SUPPLY (with admixture from Haweswater).

Typical analyses of samples taken from house taps, January to December, 1956.

	Date	April 11th	Nov. 14th
	Lab. No.	4912	5209
pH value	7.1	7.0
Colour as p.p.m. platinum	10	16
Turbidity p.p.m. silica scale	1.1	1.2
Odour and taste: Cold or hot	nil	nil
Parts per million			
Total solids dried at 180°C.	43	38
Free acidity as CO ₂	1	1
Alkalinity as CaCO ₃	15	12
Total hardness as CaCO ₃	21	19
Chlorides as Cl ₂	9	7
Nitrates as N ₂	0.05	0.05
Nitrites as N ₂	0.006	0.006
Ammoniacal nitrogen as N ₂	0.01	0.03
Albuminoid nitrogen as N ₂	0.01	0.05
Oxygen absorbed test, 4 hours at 27°C.	0.51	0.86
Silica as SiO ₂	2	2
Iron as Fe	0.12	0.08
Manganese as Mn	0.01	0.04

HAWESWATER SUPPLY. Taken at inlet into Heaton Park reservoir.

TYPICAL ANALYSES. January to December, 1956.

	Date	Jan. 23rd	Oct. 29th
	Lab. No.	4844	5185
pH value	7.6	7.2
Colour as p.p.m. platinum	7	7
Turbidity p.p.m. silica scale	1.9	2.1
Parts per million			
Total solids dried at 180°C.	47	47
Free acidity as CO ₂	1	1.5
Alkalinity as CaCO ₃	16	21
Total hardness as CaCO ₃	22	26
Chlorides as Cl ₂	9	8
Nitrates as N ₂	0.12	0.05
Nitrites as N ₂	nil	nil
Ammoniacal nitrogen as N ₂	0.02	0.01
Albuminoid nitrogen as N ₂	0.02	0.03
Oxygen absorbed test, 4 hours at 27°C.	0.50	0.40
Silica as SiO ₂	1.5	2
Iron as Fe	0.08	0.07
Manganese as Mn	nil	0.0

LONGDENDALE AQUEDUCT SUPPLY. *Raw water.*

TYPICAL VARIATIONS

This supply, derived from the peaty Longdendale gathering ground, is subject to wide seasonal variations as indicated by the following results:—

pH value	4.0	to	6.5
Colour as p.p.m. platinum	15	to	104
Turbidity p.p.m. silica scale	3.3	to	28.5
<i>Parts per million</i>			
Total solids dried at 180°C.	56	to	70
Free acidity as CO ₃	4	to	12
Alkalinity as CaCO ₃	nil	to	6
Total hardness as CaCO ₃	24	to	34
Chlorides as Cl ₂	8	to	12
Nitrates as N ₂	0.3	to	0.6
Ammoniacal nitrogen as N ₂	0.02	to	0.05
Albuminoid nitrogen as N ₂	0.05	to	0.11
Oxygen absorbed test, 4 hours at 27°C.	0.7	to	5.2
Silica as SiO ₂	7	to	10
Iron as Fe	0.26	to	0.92
Manganese as Mn	0.11	to	0.30

Extremely heavy rainfall on the 18th August caused some flood damage at Longdendale and strongly discoloured water flowed into all the impounding reservoirs. The full effect of this occurrence became apparent to the public some 7 or 10 days later by the discolouration of the supply. By the 1st October the colour and turbidity had improved by roughly 50 per cent.

LONGDENDALE AQUEDUCT SUPPLY. *Taken at Godley reservoir outlet as entering the distribution system.*

TYPICAL ANALYSES. January to December, 1956.

	Date	April 3rd	Sept. 3rd	Dec. 17th
	Lab. No.	4903	5095	5242
pH value		8.9	6.9	6.9
Colour as p.p.m. platinum		26	104	51
Turbidity p.p.m. silica scale		6.5	28.5	10.8
<i>Parts per million</i>				
Total solids dried at 180°C.		76	76	71
Free acidity as CO ₂		nil	1	2
Free alkalinity as CaCO ₃		2	nil	nil
Total alkalinity as CaCO ₃		12	12	12
Total hardness as CaCO ₃		40	40	36
Chlorides as Cl ₂		14	12	12
Nitrates as N ₂		0.50	0.35	0.60
Nitrites as N ₂		0.005	0.002	nil
Ammoniacal nitrogen as N ₂		0.15	0.12	0.18
Albuminoid nitrogen as N ₂		0.05	0.11	0.07
Oxygen absorbed test, 4 hours at 27°C.		1.38	4.96	2.85
Silica as SiO ₂		8	8	12
Iron as Fe		0.36	0.92	0.90
Manganese as Mn		0.12	0.14	0.11

This supply is sterilized by the chloramine process, which accounts for the bulk of the ammoniacal nitrogen present, as well as any traces of nitrites which may be present at times.

PLUMBO-SOLVENCY

LONGDENDALE SUPPLY

The raw water has a marked plumbo-solvent action. The supply is treated with hydrated lime so as to raise the pH value of the distributed water to 7.0 to 8.5. Records show that such treated water left in contact with lead service pipes overnight has a lead content not exceeding 0.2 p.p.m. Pb.

THIRLMERE SUPPLY

The untreated lake water has a fairly low plumbo-solvent action. The water is treated with hydrated lime so as to raise the pH value of the distributed water to around 7.0. Records show that the lead content of the water after standing in contact with lead service pipes overnight is definitely less than 0.2 p.p.m. Pb.

HAWESWATER SUPPLY

The untreated lake water has a low plumbo-solvent action. After flowing down the aqueduct the pH value of the distributed water is between 7.0 and 8.0 and its plumbo-solvent action is practically nil.

BACTERIOLOGICAL REPORT. JANUARY TO DECEMBER, 1956.

LAKES, AQUEDUCTS AND SERVICE RESERVOIRS

Lakes	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Haweswater	6	2	4	1-90	4	1-160
Aqueducts						
Haweswater	65	60	2	1-2	5	1-2
Thirlmere & Haweswater	10	9	0	—	1	2
Longdendale	52	2	41	1-900	50	1-900
Service reservoirs						
Audenshaw No. 1 ..	51	6	39	1-1,600	45	1-1,600
Audenshaw No. 2 ..	51	4	34	1-900	47	1-900
Audenshaw No. 3 ..	51	7	40	1-1,600	44	1-1,600
Denton No. 1	22	14	5	1-10	7	1-17
Denton No. 2	24	12	7	1-90	12	1-90
Godley Inlet	52	40	10	1-11	12	1-160
Godley Outlet	52	41	7	1-5	11	1-8
Heaton Park	51	1	46	1-6,000	50	1-6,000
Prestwich	25	10	13	1-17	15	1-17

Water from Thirlmere lake is chlorinated in the aqueduct near the headworks and is re-chlorinated before it enters the Manchester area of supply. Results for the supply distributed direct from the aqueduct are given in the next table.

Water from Haweswater lake is chlorinated in the aqueduct at Garnett Bridge, some 10 miles below the lake.

Longdendale aqueduct results represent the water prior to chlorination. The chlorinated water enters Godley reservoir and sufficient chlorine is added (as chloramine) to maintain a chlorine residual in the water leaving the reservoir.

As mentioned in previous reports, the Audenshaw reservoirs receive very serious pollution by gulls between the end of July and end of March. The protection method described in last year's report was again applied to Nos. 2 and 3 reservoirs and although odd very high coli counts were obtained for samples from these two reservoirs, the method has substantially reduced the general pollution as shown by the following *average* results for 30 samples taken from all 3 reservoirs during January, February and August to December.

	Average FAECAL coli count No. per 100 mls.	Average NON-FAECAL coli count No. per 100 mls.
Audenshaw No. 1 reservoir.. ..	350	370
Audenshaw No. 2 reservoir.. ..	145	130
Audenshaw No. 3 reservoir.. ..	250	195

As will be seen from the next table, the chlorinated distributed supply was entirely free from faecal coli during the year and the method of protection has contributed to this excellent result.

The pollution of the water in Denton No. 2 reservoir has been much lower than last year.

Godley Outlet water represents the water entering the distribution system. Of the 7 samples containing faecal coli, 2 contained only 1 per 100 mls., 2 contained 2, 2 contained 3 and 1 contained 5. The last result was obtained during the flood condition in August and a repeat sample was coli-free. As will be seen from the next table, the distributed water was entirely free from faecal coli during the year.

Heaton Park reservoir also receives very serious pollution by gulls and this occurred during January, February and September to December of this year. The pollution was particularly serious during January and February, when 4 samples out of 9 gave faecal coli counts of 1,600 to 6,000 and total coli counts of 3,200 to 12,000 per 100 mls. Average coli counts for this period were : faecal 1,620 and total 3,270 per 100 mls. The reservoir was treated with copper sulphate during the week commencing 13th February in order to reduce the coliform count of 12,000 per 100 mls.

Results for the three periods of the year are given in the following table.

COLIFORM BACTERIA, NUMBER PER 100 MLS. OF WATER.

	Faecal coli	Average results		Total
		faecal	Non-faecal	
January and February	35 to 6,000	1,650	1,620	3,270
March to August	0 to 90	17	22	39
September to December	8 to 2,500	325	335	660

It should be pointed out that the reservoir was treated with copper sulphate to reduce the coliform counts on two occasions during the last period of the year. The results for the chlorinated distributed water supply are given in the next table.

Prestwich No. 1 reservoir water shows slight pollution, essentially during June to October. One sample contained 34 total coli per 100 mls., 2 contained 16 and the rest did not-exceed 10.

CHLORINATED WATER SUPPLIES ON DISTRIBUTION

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Audenshaw	179	161	0	—	18	1-5 a
Denton	104	96	2	1	8	1-2
Godley	146	135	0	—	11	1-1600b
Heaton Park	175	120	17	1-35 c	55	1-90 c
Prestwich	132	127	0	—	5	1-5 d
Widmermere aqueduct	91	88	1	1	3	1-35 e
Totals	827	727	20	—	100	—

NOTES:—

- (a) The non-faecal coli would be derived from 'after-growths' in deposits in the mains. Ten of these samples contained only 1 coli per 100 mls., 3 samples contained 2, 1 sample contained 3 and the remaining 4 samples contained 5. On the same dates as these samples were taken, 30 other samples were coli-free.
- (b) Out of the 11 samples containing non-faecal coli, 7 contained only 1 to 3 per 100 mls., the remainder containing 5, 13, 50 and 1,600. All these coliform bacteria would be derived from 'after-growths' in deposits in the mains, but the last 4 results, taken in the months of July, September and November, would represent disturbed mains conditions. The count of 1,600 per 100 mls. was obtained for a sample taken in an area actually being flushed at the time and a repeat sample was coli-free. Sixteen (16) other samples were taken on the same dates as the above 11 and they were coli-free.
- (c) Chlorination, applied as chloramine, has been continuous at the rate of 0.4 p.p.m., apart from a period of about 2 weeks at the beginning of February, when 'icing' trouble occurred at the chlorine plant.

The chlorinated water samples may be divided into 2 sections:

1. Those taken at a booster station, after some two hours' contact with the chloramine, prior to distribution, and
2. Those taken from house taps.

The results have been as follows:

	Total number of samples	Samples free from faecal coli	Samples with faecal coli present	
			No. of samples	No. per 100 mls.
1. <i>Booster station samples</i>				
January, February and September to December	26	17	4 2 2 1 — 9	1 2 8 35
March to August inclusive	25	24	1	2
2. <i>Samples from house taps</i>				
January, February, and September to December	68	61	4 2 1 — 7	1 2 3
March to August inclusive	56	56	0	

The chlorine residuals found in the water at the booster station varied from 0.05 to 0.43 p.p.m., but most of the results played between 0.25 and 0.35 p.p.m. Over the year the residual averaged 0.30 p.p.m. Two results of 0.05 p.p.m. occurred during the 'icing' trouble at the plant in February.

The one sample with 35 faecal coli per 100 mls. occurred during the 'icing' period, when the raw water contained 3,500 faecal coli per 100 mls. Four of the samples on distribution contained 1, 1, 2 and 3 faecal coli per 100 mls. during the same week.

Another sample with 8 faecal coli occurred in the same 'icing' period, when the raw water contained 6,000 faecal coli per 100 mls. Three (3) samples on distribution that week were free from faecal coli.

The other sample with 8 faecal coli occurred in October, when the raw water contained 600 faecal coli per 100 mls. Three (3) samples on distribution were coli-free.

A number of samples from house taps (36) contained non-faecal coli, but 75 per cent. of these (27) contained only 1 or 2 per 100 mls. Six (6) contained 3 or 5, but 3, however, contained 90, 13 and 25 per 100 mls. in April, May and August respectively. These non-faecal coli were derived from 'after-growths' in deposits in mains, but the 3 high results were caused by disturbances of mains deposits as other samples taken on the same dates were coli-free.

The pollution of the reservoir by gulls in the first two months of the year was extremely severe and it was still very severe in the last four months, so that it has been difficult to maintain a supply at the house taps absolutely free from faecal coli. Nevertheless, during the period of severe pollution 90 per cent. of the house taps samples were free from faecal coli and the remaining 10 per cent. contained faecal coli in minimal numbers, which represented 99.2 to 99.97 per cent. sterilisation of the raw water. During the period of relatively low pollution of the reservoir, the water delivered to the public was 100 per cent. free from faecal coli.

- (c) Only 5 samples on the Prestwich supply contained non-faecal coli this year and 4 of these contained only 1 per 100 mls., the remaining 1 contained 5. Seven (7) other samples taken on the same dates were coli-free. These coli were derived from 'after-growths' in deposits in mains.
- (e) After-growth and disturbances of deposits in mains caused 2 samples to contain 8 and 35 non-faecal coli per 100 mls. on widely separated dates. Other samples on the same dates were coli-free.

GENERAL

Chlorination of all the supplies has been maintained throughout the year and the flushing of the mains has been continued as a general practice.

Aftergrowths of coliform bacteria in deposits in the mains has again resulted in some samples of the distributed water containing coliform bacteria and on occasions, when these deposits have been disturbed, samples have given high coliform counts. In all cases the coliform bacteria have been non-faecal types.

The general water supply has given the following results on distribution:—

Total number of samples..	879	
Samples free from all coli in 100 mls.	768	87.4 per cent.
Samples free from faecal coli in 100 mls.	852	96.9 per cent.
Samples free from or containing only 1 faecal coli per 100 mls.	865	98.4 per cent.
Samples free from or containing not more than 2 faecal coli per 100 mls.	872	99.2 per cent.
Samples free from or containing not more than 3 faecal coli per 100 mls.	875	99.6 per cent.

The bacteriological quality of the distributed water supply has been maintained at a very satisfactory standard throughout the year despite the increased pollution of the large service reservoirs.

BACTERIOLOGICAL REPORT. JANUARY TO DECEMBER, 1956.

ADDITIONAL RESULTS

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
<i>Service reservoirs</i>						
owdon	26	16	3	1—25	10	1—35
orton upper	12	0	7	1—17	12	1—160
orton lower	12	5	4	2—20	7	2—50
<i>Supplies</i>						
owdon	91	70	10	1—2	21	1—180 + a

NOTES:—

(a) The 10 samples with faecal coli present were as follows:—

Samples	Coli present No. per 100 mls.
6	1
4	2
—	
10	
—	

The 21 samples with non-faecal coli present were as follows :—

Samples	Coli present No. per 100 mls.
12	1
3	2
1	3
2	8
1	13
1	160
1	180+
—	
21	
—	

All of these results are due to 'after-growths' in deposits in the mains. The counts of 8 and 13 were due to some disturbances of these deposits. The 2 counts of 160 and 180+ were obtained from taps in one street on two consecutive weeks, without any known cause, while samples from surrounding streets were satisfactory. Seventeen (17) samples taken the same times as the above 21 were coli-free.

Comments of the Medical Officer of Health

In previous years the Medical Officer of Health has indicated that the water supply is not at all times satisfactory. Longdendale water in particular is often polluted markedly. That the quality of distributed water is as high as it is, is in itself a tribute to the care and efficiency of the Waterworks Department. But just as a need for therapeutic medicine means some failure of preventive medicine so the need for the dosing of public water supplies is an index of failure, doubtless unavoidable in existing circumstances, to prevent pollution.

FOOD SUPPLY

The experience of a full year's operation of the Food and Drugs Act, 1955, the Food Hygiene Regulations and local Byelaws has not given rise to unusual difficulties other than those associated with the prevailing shortage of inspectorial staff. This is reflected mainly in the number of inspections or visits and samples obtained for examination. Although there has been necessarily a reduction in routine work, so useful in maintaining supervision and standards, all matters needing investigation have been fully dealt with.

Of approximately 6,500 food premises which should be regularly visited, including 507 registered in accordance with the provisions of the Food and Drugs Act, 1955 (Section 16) there are 3,300 dealing in groceries, provisions and dairy products, (including 12 dairies) 780 in butcher's meat etc., 130 in fish and poultry, 780 in greengrocery and fruit, 450 in bread and flour confectionery, and 1,000 which are either restaurants or snack bars.

5,904 inspections of these and other food premises were made. 7 of the registered food premises were found to have discontinued business.

At 170 of the food premises inspections revealed unsatisfactory standards cleanliness or other defects. Many of the matters were of a minor nature and cautions resulted in improvements and repairs being executed forthwith. It was found necessary in 7 instances to institute legal proceedings for gross infringements of the Food Hygiene Regulations, 1955. In 5 of the cases penalties were imposed by the Magistrate. The summonses concerned with the remaining 2 cases were dismissed, in one case because of a drafting technicality in the summonses and in the other case because the Magistrate was not satisfied with the fact that a food business was being carried on at the material date.

It was necessary also to institute legal proceedings for contravention of the Food Hygiene Regulations by a food hawker retailing "hot dogs". A penalty also was imposed in this case.

354 food hawkers are registered and in addition to the personal registrations there are 108 registered food storage premises used by these traders. In 8 instances it was found necessary to caution food hawkers regarding unsatisfactory conditions and defects, following which satisfactory conditions were restored. The registered food hawkers include 21 operating mobile canteens and 4 with fish frying vans.

The registration of street traders, most of whom are also food hawkers, dealt with under the provisions of Section 61 of the Manchester Corporation Act, 1950. It was necessary for the Department to caution 42 street traders and to revoke the registration of 2 of them. Contraventions of the Food Hygiene Regulations were not involved.

The advisory activities of the Department increased noticeably at the time of the operative dates of the Food and Drugs Act, 1955, and the Food Hygiene Regulations. Several branches of the food industry and associated undertakings requested information in respect of the Department's views and requirements arising from the Act and Regulations, and representatives of the Department attended several meetings of the traders concerned and assisted them by a general address or individual advice. This has facilitated smooth application of the new provisions.

Little difficulty has been experienced in securing compliance with the Food Hygiene Regulations, although a considerable number of food premises in the City remain to be dealt with.

Staff seconded to assist the completion of the survey of food premises will be augmented when possible with a view to ensuring general observance of the requirements of the Food Hygiene Regulations.

The continued distribution of imported egg products entailed further sampling for bacteriological examination by the Public Health Laboratory Service and close liaison with other authorities and the trade to ensure that effective control was exercised.

312 cases of food poisoning were investigated of which 86 individual cases were notified by medical practitioners. Of the remaining 226, 174 formed 5 main outbreaks ranging from 14 to 78 cases at works or school canteens. No causal organisms were found in the outbreaks but in the largest, cooked ham was suspected to have been the vehicle of infection, roast pork in two and reheated roast beef in another.

A summary of all the cases is included in the epidemiology section of the report.

Milk and ice cream control

The regular inspection of dairies, their equipment and methods of milk distribution and the submission of milk samples to the Public Health Laboratory for the appropriate examinations have continued. Similar measures were also taken in respect of the manufacture and sale of ice cream.

City dairies

More than 3,000 visits were paid to dairies and milk distribution premises during the year and the general standard of cleanliness was found to be satisfactory. It was not found necessary to institute legal proceedings in respect of contraventions of the Milk & Dairies Regulations but in one case a cautionary notice was served under Section 44 of the Food and Drugs Act, 1955. This was the result of a breach of a Dealer's (Pasteurized) Licence in that two successive samples failed to satisfy the phosphatase test. All subsequent samples from the dairyman concerned have proved to be satisfactory.

The inspection and checking of the 13 licensed pasturizing plants and six licensed sterilizing plants have been carried out at least once a month. The efficiency of these plants is reflected in the high percentage (99.1) of satisfactory results obtained in samples of the milk taken at the dairies and on the road whilst the milk was in course of delivery to hospitals, schools and the general consumer. 803 such samples were taken throughout the year with only 7 of them failing to pass the prescribed tests laid down by the Ministry, viz., the phosphatase test for efficiency of heat treatment and the $\frac{1}{2}$ hr. methylene blue test for keeping quality.

The number of distributors of milk registered in the City is now 2,038. This figure includes 23 dairymen retailing milk in Manchester and whose premises are outside the City.

An interesting development during the year in connection with the distribution of milk was the introduction of a new type of packaging which takes the form of a polythene lined carton in the shape of a tetrahedron. A machine forms the carton and fills it with the appropriate quantity of milk. The carton is then heat sealed and discharged from the machine. An examination of a number of sealed empty cartons showed them to be sterile.

An extension of the carton system of milk distribution could in some measure alleviate difficulties and problems which arise from the use of glass bottles, such as the danger of glass in milk from damaged bottles, the entry of foreign bodies and matter into empty milk bottles, the misuse of milk bottles and the occasional failure to satisfactorily cleanse misused bottles by ordinary means.

Another item of interest was the introduction into one of the larger dairies of the ultra high temperature method of milk sterilization. By this method milk is pre-heated to 180°F., homogenized, then heated to 275°F. for 20 seconds, immediately cooled to 165°F. for bottling and sealing and then transferred to a rotary sterilizer where it is again heated to 230°F. for forty-five minutes. It is claimed that the action of the rotary sterilizer, in which the milk is continuously agitated, achieves a more effective transference of heat to the milk, and the milk sterilized in this manner has a much longer keeping quality than that of milk sterilized by the usual process.

Milk supply to hospitals, schools and day nurseries

Pasteurized milk delivered to the various hospitals, schools and day nurseries in the City was regularly sampled. The results of the examinations have shown that high standards of quality and cleanliness have been uniformly maintained and on no occasion was the milk found to contain tubercle bacilli.

Raw milk from the attested herds at Langho Colony farms is supplied to the Langho Epileptic Colony and Booth Hall Hospital and it has been regularly sampled at the farms and on arrival at Booth Hall Hospital. The results of the examinations have shown high standards of quality and cleanliness and an absence of tuberculous infection.

City and "outside the city" milk producers

3 samples of raw milk from City milk producers and 7 samples from "outside the city" producers coming into the City were examined by the biological test for tubercle bacilli. One of the City's producers' samples proved positive whilst all the samples taken from "outside the city" producers proved negative. All the samples from the last mentioned group were from tuberculin tested herds. The Ministry of Agriculture & Fisheries were notified of the positive result with a request that the necessary action may be taken.

In addition to the positive result mentioned, seven local authorities adjoining the City (after taking the necessary action themselves under the Tuberculosis Order, 1938) notified the department that 41 samples of ungraded milk taken by their inspectors from farmers in their area consigning all milk produced by them to Manchester dairies, had been found to contain tubercle bacilli. It was ascertained that all the milk in question was pasteurized or sterilized in the Manchester dairies before delivery to consumers.

A small number of complaints was received relating to the condition of milk bottles. Approximately 700,000 bottles are washed daily in the City dairies which are equipped with modern efficient washing machines and have staff solely for the inspection of washed bottles, but the possibility of an improperly washed bottle reaching the public has not yet been eliminated. Every opportunity is taken of urging that the utmost care should be taken by those responsible but the general public would render valuable assistance in ensuring that empty bottles are not misused.

No outbreak of disease attributable to milk occurred during the year.

Ice cream

Enforcement of the requirements of the Food Hygiene Regulations has resulted in the installation of improved equipment in vehicles used for the sale of loose ice cream. The vehicles now carry adequate supplies of hot water and facilities for securing the personal cleanliness of the vendors.

The number of premises registered for the manufacture and/or sale of ice cream has increased to 2,139. The great majority of these premises are equipped with totally enclosed automatic cabinet refrigerators which sell only pre-packed ice cream. Loose ice cream is sold only from a small number of premises and at these premises satisfactory provision is made for the effective cleansing and sterilizing of utensils.

Regular visits of inspection have been made to ice cream premises, and the general standard of cleanliness has been good. In no instance was it found necessary to institute legal proceedings in respect of dirty premises or equipment, etc.

55 samples of ice cream were taken during the year for bacteriological examination. 46 (83·6 per cent.) were placed in Grades 1 and 2 and were, therefore, satisfactory. 5 (9·1 per cent.) came into Grade 3 which is fairly satisfactory, whilst 4 (7·3 per cent.) fell into the lowest grade (Grade 4). Thorough investigations were made at the factories from which the Grades 3 and 4 samples came. Subsequently further samples of the ice cream obtained in each case were Grade 1.

There was no reported case of illness notified to the department during the year which could be traced to ice cream.

TABLE I.

Milk (Special Designation) Regulations, 1949

LICENCES ISSUED DURING THE YEAR

Dealer's licence to use the designation:

"Pasteurized"—

(A) Pasteurizing establishments	13
(B) Distribution premises including bottled milk shops ..	1,598

"Sterilized"—

(A) Sterilizing establishments	6
(B) Distribution premises including bottled milk shops ..	2,007

"Tuberculin tested"—

Dairies and bottled milk shops	535
--	-----

Supplementary licences to use the designation:

Pasteurized	21
Sterilized	20
Tuberculin tested	20

TABLE II.
Bacteriological and biological examination of pasteurized and sterilized milks

Place of collection of sample	BACTERIOLOGICAL, ETC., EXAMINATION *				BIOLOGICAL EXAMINATION FOR PRESENCE OF TUBERCLE BACILLI					
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage		
Pasteurizing plant at dairy..	144	144	100.0	—	—	—	—	—	—	—
Hospitals 	161	161	100.0	—	—	162	—	162	100.0	—
Schools and day nurseries . .	150	147	98.0	**3	2.0	153	—	153	100.0	—
On road during distribution .	348	344	98.8	4	1.2	—	—	—	—	—
Totals 	803	796	99.1	7	0.9	315	—	135	100.0	—

In addition to the above samples, 334 samples of milk were taken at hospitals, schools and day nurseries in the City and submitted for chemical analyses. The results of the analyses showed that all samples came up to the legal standard.

** 2 of these unsatisfactory samples were from an "Outside the City" dairymen.

- * OFFICIAL TEST : (1) Pasteurized and Tuberculin Tested (Pasteurized) Milk to pass the phosphatase and $\frac{1}{2}$ hour methylene Blue tests.
(2) Sterilized and Tuberculin Tested (Sterilized) Milk to pass the turbidity test.

Food and drugs adulteration

The administration of the Acts, Regulations and Orders directed to the prevention of adulteration or irregularities in food and drugs, entails the sampling of all basic foods normally used by the average family for submission to the Public Analyst for analysis.

The total number of samples procured was 2,375 of which 910 were of milk including 8 "appeal to cow" samples. In addition 334 informal samples of milk were submitted by the milk control inspectors. 228 of the milk samples were purchased from retailers and all conformed to the standard prescribed by the Sale of Milk Regulations, 1939. One bottle of sterilized milk received from a householder and submitted for analysis contained 73 per cent. of added water obviously due to the defective "crown cork" having allowed the admission of water from the sterilizing tank. The dairy company was cautioned.

681 samples of milk were taken from farmers' consignments on arrival at dairies in the City, and of these 131 (19 per cent.) proved on analysis to be below the prescribed standard. 67 of these samples were deficient in fat but as the average fat of the respective consignments of which they formed a part exceeded the standard prescribed by the Sale of Milk Regulations, 1939, no action was taken.

Cautions were sent to 22 farmers in respect of 48 samples which were below the prescribed standard, and legal proceedings were instituted against one farmer in respect of 2 samples found to be substantially adulterated. Fines and costs totalled £24 16s. There were 14 samples of milk with minor deficiency of non-fatty solids, but further samples from the same source proved to be satisfactory.

1,465 samples of food (other than milk) and drugs were procured and submitted to the Public Analyst; of these 856 were formal samples and 609 were informal.

A new feature in the Food and Drugs Act, 1955, requires a notification to the packer or manufacturer of a pre-packed food when formal sampling has been carried out, providing the name and address of the manufacturer or packer appears on the wrapper or container, and to comply with this provision 14 notifications have been sent.

Irregularities

The irregularities arising in food and drugs (other than milk) were dealt with in the following manner:—

Samples of canned soup, malt vinegar, mixed dried fruit, tapioca, pickled fruit pudding and Christmas pudding contravened the Labelling of Food Orders, 1953, i.e., the ingredients were not stated on the label correctly, or clearly legible, or not in the quantitative order. The manufacturer or packer was cautioned and the commodities re-labelled.

Two samples of butter sweets contained less than the suggested standard of 4 per cent. of butter fat contained in a Code of Practice agreed between the Ministry and representatives of the Chocolate and Sugar Confectionery trade. The manufacturers were cautioned.

A minor deficiency of soluble solids occurred in two samples of jam and the manufacturers were cautioned, but in connection with a sample of apple and bilberry jam deficient in soluble solids to the extent of 7·7 per cent. legal proceedings were instituted and the manufacturer was fined £10 and £1 7s. 6d.

Two informal samples of non-brewed condiment were deficient in acetic acid. A formal sample of one of these commodities was obtained and proved satisfactory but in the other case a formal sample was not obtainable, the article having been withdrawn from sale.

The amount of butter fat contained in a sample of Eccles cakes was insufficient to justify an advertisement which suggested or implied the cakes contained butter. The manufacturer was cautioned and the advertisement withdrawn.

A number of samples of food, some of which were submitted by members of the public contained extraneous matter. The circumstances of each case were investigated and resulted in either withdrawals and destruction of stocks, actions against manufacturer or packer and in some instances the facts were reported to the Medical Officer of Health of the local authority in which the factory was situated. In the case of a meat pie containing part of a cigarette the manufacturer was prosecuted and fined £10 and £1 3s. costs.

There were two contraventions of the Public Health (Preservatives in Food Regulations) 1925-1953. An informal pre-packed sample of sultanas contained excess of sulphur dioxide, but a further formal sample of the same commodity was satisfactory. In the case of a formal sample of bilberry jam containing excess of sulphur dioxide, legal proceedings were instituted in 1957 and the manufacturer was fined £10 and £1 7s. 6d. costs.

age

A report of the Food Standards Committee of the Ministry has suggested that regulations should be made prescribing a minimum meat content of 65 per cent. for sausages made wholly or mainly from pork and 50 per cent. for other meat sausages. Eleven samples examined during the year compared favourably with that suggested standard which was formerly available as a legal requirement under the Meat Products (No. 3) Order, 1952.

Public Health Condensed Milk Regulations, 1923-1953.

Public Health Dried Milk Regulations, 1923-1948.

Eleven samples of condensed and dried milks were submitted to the Public Health Laboratory for examination and the quality and labelling requirements were found to satisfy the Regulations.

Food Standards (Ice Cream) Order, 1953.

Eleven samples of ice cream submitted for analysis complied with the prescribed standards.

The samples of foods and drugs which failed to meet the requirements of the Regulations and Orders are detailed in the following tabular statement.

Adulterated and other unsatisfactory samples and action taken

Private and informal samples										Formal samples							
Adulterated or unsatisfactory	Formal samples obtained	Further samples pending	Cautioned	Stocks withdrawn	Notified to other local authority for investigation	Legal proceedings				Article	Adulterated or unsatisfactory	Cautioned	Further samples pending	Legal proceedings			
						Summonses	Fined	Amount of fines	Amount of costs					Summonses	Fined	Amount of fines	Amount of costs
15	14		1					£ s. d.	£ s. d.	Milk	50	224		2	2	£ s. d. 20 0 4	£ s. d. 16 0
										Sweets	2	2					
1	1									Canned soup ..	1	1					
2	1		1							Dried fruit ..	2	2					
1					1*					Mineral water ..							
2			2		1*					Pickles							
										Jam	4	2		2	2	£ s. d. 20 0 0	£ s. d. 2 15 0
										Non-brewed condiment ..	1	1					
2	1			1						Ammoniated tincture of quinine ..	1	1					
										Tapioca	1	1					
										Fruit pudding ..							
1			1							Christmas pudding ..							
1			1							Flour	1	1	1				
2		2								Malt vinegar ..	1	1					
										Eccles cakes ..							
1			1							Bread							
1			1							Sweetcake ..							
2			2		1*					Canned vegetables ..							
1			1														

REPORT FROM MARKETS DEPARTMENT ON SUPERVISION OF MEAT AND OTHER FOODS

The Medical Officer of Health is indebted to the General Manager of the Markets Department for the following particulars relating to the operations of the Department during the year ended 31st March, 1956.

The numbers of animals slaughtered at the City Abattoir during certain years are shown in Table A; Table B shows the total condemnations in the City; and Table C the total weight of meat condemned at the City Abattoir and Wholesale Meat Market.

The bulk of the meat, fish and fruit which is condemned is found to be unfit for food on arrival at the markets, railway stations, and wholesale houses. An efficient system of inspection at the centre of distribution lessens the risk of diseased meat, etc., being exposed for sale in retail shops.

The staff establishment for inspectors comprises 1 chief veterinary inspector, assistant veterinary inspectors and 10 meat, fish, etc., inspectors.

TABLE A
Animals slaughtered at the City Abattoir during certain years

Year ended 31st March	Cattle	Sheep and lambs	Calves	Pigs	Goats
1947	64,061	233,675	46,701	1,385	—
1948	75,051	179,350	34,246	752	—
1949	58,645	208,725	39,447	2,659	1,223
1950	72,449	209,048	44,170	3,058	2,674
1951	80,852	216,399	52,259	6,403	4,273
1952	97,467	194,143	44,755	7,718	3,780
1953	68,400	232,182	31,720	17,466	909
1954	65,333	230,662	27,425	31,978	6
1955	75,278	358,426	25,642	48,034	—
1956	73,791	402,691	22,501	46,395	—

TABLE B
Total condemnation of various foodstuffs during 1947-56

Kind of food	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Meat (tons)	821	852½	808	978	954¾	1,113½	775	690	514½	411½
Fish (tons)	190	387½	284	316¾	160	79½	57½	55¾	44½	48
Fruit (tons)	26½	144½	80	136	83¾	91½	81	57¾	64½	85
Vegetables (tons) ..	127	326½	131¾	162½	109½	61	23	94½	61¾	86½
Eggs (number) ..	384	946	40	640	1,614	900	2,198	4,844	2,552	8,846
Game (head) ..	223	156	524	1,835	675	184	658	704	1,213	593
Poultry (head) ..	5,129	2,812	6,465	15,043	7,419	5,048	4,130	6,712	5,923	3,942
Rabbits (head) ..	3,363	2,217	1,731	11,040	12,610	17,372	9,587	9,925	3,967	407

TABLE C

Meat condemned at the City Abattoir and Wholesale Meat Market

Particulars	Year ended	
	31st March, 1955	31st March, 1956
Total weight of meat condemned at the City Abattoir and Wholesale Meat Market	Tons 490	Tons 368½
Of which the weight of dressed meat consigned from places other than the city was	18	16
Included in which were imported offals amounting to ..	274 lbs.	3,284 lbs.

Unwholesome food condemned

Kind of food	Year ended	
	31st March, 1955	31st March, 1956
MEAT :—	lbs.	lbs.
Beef	1,025,125	791,962
Mutton	15,498	28,477
Veal	9,334	8,150
Pork	101,638	89,204
Venison	28	—
Imported offal	274	3,284
	1,151,897 = 514½ tons	921,077 = 411½ tons
FISH :—	lbs.	lbs.
Fish	89,504	96,889
Shellfish	9,976	10,686
	99,480 = 44½ tons	107,575 = 48 tons
GAME	head 1,213	head 593
POULTRY	5,923	3,942
RABBITS	3,967	402
FRUIT	lbs. 144,062 = 64½ tons	lbs. 190,220 = 85 tons
VEGETABLES	138,040 = 61½ tons	193,563 = 86½ tons
MISCELLANEOUS :—	No.	No.
Eggs	2,552	8,846
Evaporated, condensed and other canned milks ..	lbs. 6,430	lbs. 5,174
Sundry provisions	60,777	79,071

Approximately 675 $\frac{3}{4}$ tons of unwholesome food were condemned under all readings by the inspectors of the Markets Department during the year ended 31st March, 1956.

Condemned food is handed over to the Cleansing Department of the Corporation for processing for commercial or industrial purposes, or for destruction by fire. A small portion of the total condemned as unfit for human consumption is found usable for animal feeding stuffs and for commercial and industrial purposes.

With the exception of the following, which were seized while deposited and exposed for sale, the quantities given in the preceding tables were surrendered after being condemned by inspectors of the Department:—

Kind of food	Year ended	
	31st March, 1955	31st March, 1956
Beef	lbs. Nil	lbs. 51 $\frac{1}{2}$
Bread.. .. .	2 $\frac{1}{4}$	Nil
Chocolate candy	Nil	7 $\frac{1}{4}$
Fish	1 $\frac{1}{2}$	Nil
Meat Pies	$\frac{1}{2}$	Nil
Shellfish	4	Nil
Vegetables.. .. .	Nil	40

NOTE.—The term “surrendered” includes cases in which inspectors have discovered unwholesome food in the course of their duty, but in which, owing to the salesman’s acceptance of the inspector’s decision, it has been deemed unnecessary to obtain a magistrate’s order prior to destruction.

Carcases inspected and condemned—year ended December, 1956

	Cattle excluding cows	Cows	Calves	Sheep and lambs	Pigs
Number killed and inspected—					
At the City Abattoir	59,550	23,565	23,563	412,416	35,371
Brought into the City after killing and inspected	13,655		15,227	61,976	41,488
All diseases except tuberculosis—					
Whole carcases condemned:—					
At the City Abattoir	33		38	165	69
Brought into the City after killing	14		11	19	10
Carcases of which some part or organ was condemned:—					
At the City Abattoir	2,238		11	231	1,081
Brought into the City after killing	197		8	23	42
Percentage of the number inspected affected with disease other than tuberculosis:—					
At the City Abattoir	2.7		0.2	0.1	3.2
Brought into the City after killing	1.6		0.1	0.06	0.12
Tuberculosis only—					
Whole carcases condemned:—					
At the City Abattoir	44	250	9	—	35
Brought into the City after killing	1		1	—	1
Carcases of which some part or organ was condemned:—					
At the City Abattoir	597	3,023	—	—	680
Brought into the City after killing	9		—	—	18
Percentage of the number inspected affected with tuberculosis:—					
At the City Abattoir	1.07	13.9	0.04	—	2.02
Brought into the City after killing	0.07		Negligible	—	0.04

NOTE.—The bulk of carcases brought into the City continued to be inspected at the place of slaughter and certificates of inspection were

SMOKE PREVENTION

During the year the Clean Air Act, 1956, with its comprehensive approach to smoke prevention was approved and at the close of the year certain of its provisions became operative. Those dealing with the new prohibition of dark smoke and the prevention of grit and dust from furnaces remain deferred until early in 1958 on a date to be fixed by the Minister of Housing and Local Government.

Provisions which became operative on the 31st December include the establishment of smoke control areas; new furnaces to be smokeless as far as practicable; the height of chimneys to be sufficient to prevent, as far as practicable, smoke, grit, dust or gases becoming prejudicial to health or a nuisance; the control of colliery spoilbanks; and the making of a building byelaw to require heating and cooking installations to be smokeless so far as practicable.

Apart from requirements as to processes controlled under the Alkali etc., Works Regulation Act, 1906, under which control of the emission of smoke, grit and dust from such "special cases" generally becomes a matter for the Minister of Housing and Local Government through the Alkali etc., Works Inspectors, all the duties of the Act are a responsibility of local authorities.

Comparison between the sections now operative and Manchester's earlier Local Act powers shows a similarity in the provisions relating to the control of new furnace installations and the establishment of smoke control areas. An important innovation in the Clean Air Act, however, is the control of the height of new chimneys to prevent, as far as is practicable, smoke, grit, dust or gases from being discharged at or deflected to low levels so as to be prejudicial to health or a nuisance.

Hitherto this question of the height of chimneys has tended to be concerned more with how low they could be built to preserve visual amenity than with how high to protect public health whilst also having due regard to practical considerations.

Clearly, however, the issue also involves the type of fuel to be burned, and this complexity of factors became the subject of an unusual Local Inquiry under the Town and Country Planning Act, 1947, dealing with a difference between the Corporation and the Regional Hospital Board on a proposal to build a chimney 96 feet in height for a suggested coal burning boiler plant at Christie Hospital.

The Corporation contended that the proposed development would be detrimental to the amenities of the residential neighbourhood; the erection of a tall chimney whilst necessary for the dispersal of the products of the combustion of solid fuel would be quite out of keeping with the district, though the proposed plant would be efficient for the burning of coal it could not be completely smokeless under all working conditions at all times; and in any event the emission of oxides of sulphur to an extent of more than 60 tons per annum was estimated. In all the circumstances the Corporation further submitted that the proposed development would be more appropriately applicable to an industrial steam raising plant in a manufacturing neighbourhood than to a hospital in a residential area. Finally, whilst appreciating the matter of expense, the dual elimination of both visible and invisible pollutants could well be achieved by the use of town's gas. This would also avoid the use of a high chimney.

The Hospital Board rested their case on the proposed plant being capable of satisfying the Clean Air Act in that so far as was practicable it would be capable of being operated without emitting dark smoke and stressed the economical disadvantage of steam raising boiler plant burning gas compared with coal.

Ultimately, after consultation with the Minister of Health, the Minister of Housing and Local Government consented to the installation of the proposed plant and chimney subject to only "authorised fuels" being used as would be required in a smoke control area.

In conformity with the Committee's policy of securing the establishment of smokeless zones concurrently with the residential redevelopment of areas, a survey has been made of a convenient geographical unit of 43 acres embracing existing properties and land for new housing within the approximate boundaries of City Road, the Stretford municipal boundary, Chester Road and Limb Street, Hulme. As the "Smoke control area" provisions of the Clean Air Act, 1956, will be operative before this area can be established as a smokeless zone under the Manchester Corporation Act or a smoke control area under the Clean Air Act, the proposal will be submitted to the Minister with a view to the creation of a smoke control area. In addition, two areas in Wythenshawe have been declared to be smokeless zones under the Manchester Corporation Act, 1946, so as to ensure that newly developed residential areas no longer increase pollution by domestic smoke. Particulars of these areas are given later in this report.

Where heavy though at present not actionable emissions of smoke have been observed, the manufacturer's attention has been drawn not only to the desirability of minimising such emission, but also to the necessity of so adapting and controlling the plant so that the more stringent standards likely to be introduced under the Clean Air Act, 1956, may be anticipated and satisfied. The practice of the Department in advocating the use of mechanical methods of firing wherever practicable has continued and instances have occurred in which the industrialists concerned have been so impressed with the results that existing plant has been converted to mechanised firing. One coal burning mechanical fired steam-raising plant was converted to oil firing with consequent elimination of a sporadic grit nuisance which occurred when coal deliveries contained an excess of "fines". Four steam-raising plants were also dismantled, as no steam-raising equipment in two boiler houses was found adequate to take the whole load.

A significant reduction in air pollution occurred rather fortuitously with the dismantling of an old type of salt-cake furnace, used in the manufacture of hydrochloric acid when the business was taken over by another chemical manufacturer. There were practical difficulties in reducing smoke from such a process because of the necessity of delaying combustion so as to permit of a long flame passing over the products in a muffle furnace, and the minimising of the draught from the chimney to avoid any risk of hydrochloric acid vapour from being emitted with the chimney gases.

As in previous years, the principal cause of excessive smoke emission continued to be unskilled or careless firing. With hand-firing, the fuel is applied intermittently, the smoke being at its maximum immediately after firing and at its minimum immediately prior to refueling. The stoker on such a plant must therefore exercise constant attention during each firing period, and laxity on one occasion may result in an actionable emission being detected. Although mechanical firing will eliminate the many separate cycles of firing and

Therefore attain more consistent results, it cannot operate without skilled control, and carelessness in the operation of mechanically fired plant could cause longer periods of undue smoke to be emitted than would be likely to occur with hand-fired plant, without the stoker being aware of the fact. For this reason the importance of skilled stokers is still an essential requirement in coal-burning plant.

The following statement relates to the work of the smoke inspectors under the provisions of the Public Health Act, 1936:—

Timed observations taken	731
Black smoke, two minutes and over in half-hour periods	40
Black smoke, two minutes and over in half-hour periods at premises outside the city boundaries	2
Smoke other than black and causing nuisance	4
Black smoke under two minutes	327
Dense smoke other than black not in such quantity as to be a nuisance	21
Observations taken of locomotives on railways	2
Total amount of black smoke observed in minutes	500
Average amount of black smoke observed (in minutes) per observation revealing black smoke.. .. .	1.35
Total amount of dense smoke other than black observed (in minutes) per observation revealing dense smoke other than black	100
Average amount of dense smoke other than black observed (in minutes) per observation revealing dense smoke other than black	4.00
Complaints from all sources	126
Visits to works re smoke abatement	2,385
Premises where inspectors recommended plant to be altered, improved or repaired	58
Premises where plant was found to have been altered, etc., as a result of inspector's recommendation	41
Cases reported to Committee	46
Cases cautioned or excused	20
Statutory notices served—black smoke	13
Statutory notices served—other than black	6
Statutory notices expiring without further action	22
Prosecutions for smoke nuisances, penalties imposed	5
Magistrates Order granted—black smoke	1
Magistrates Order refused—black smoke	1
Amount of penalties and costs	£15 7s. 0d.
Approximate number of industrial chimneys, including "exempted" chimneys ..	1,661

Cases reported to Committee—causes of emission:—

Bad firing	28
Unskilled fireman	4
Unsuitable fuel	3
Bad firing and unsuitable fuel	2
Fireman having other duties to perform	1
Insufficient boiler plant	1
Defects in plant	2
Alterations to plant in progress	5

Prior approval of the installation of furnaces

It has long been recognised that punitive action alone could not achieve noteworthy results in minimizing smoke emissions. Consequently, in 1946 Manchester Corporation pioneered legislation in this country in securing some measure of control over the installation of new furnaces by the inclusion of the following Section in the Manchester Corporation Act, 1946:—

36— (1) No person shall instal in any building whether erected before or after the passing of this Act, any furnace for steam raising or for any manufacturing or trade purpose unless such furnace is so far as practicable capable of being operated continuously without emitting smoke.

(2) Any person who contravenes the provisions of this Section shall be liable to a penalty not exceeding ten pounds and to a daily penalty not exceeding two pounds.

(3) If a person before installing in a building a furnace to which this Section applies, submits to the Corporation plans, proposals and particulars of the proposed furnace and furnishes them with such other necessary information in regard thereto as they may require, the Corporation shall within a period of six weeks from the date upon which such plans, proposals, particulars and information are received by them serve a notice upon such person stating whether or not they are satisfied that the furnace is so far as practicable, capable of being operated continuously without emitting smoke, and if they are so satisfied or if they do not serve a notice upon such person before the expiration of the said period of six weeks no proceedings shall be taken against him under this Section in respect of the installation of that furnace in accordance with the plans, proposals, particulars and information so submitted and furnished.

(4) In determining for the purposes of this Section whether a furnace is so far as practicable capable of being operated continuously without emitting smoke, the Corporation or a court shall if either of the parties so desire have regard to cost and to local conditions and circumstances.

This Section was subsequently amended by Section 42, Manchester Corporation Act, 1950:—

42— 1. Section 36 (Prevention of smoke from industrial furnaces) of the Manchester Corporation Act, 1946, shall have effect by the substitution for subsections (1) and (2) thereof of the following subsections:—

(1) No person shall install in any building whether erected before or after the passing of this Act or on any premises any furnace unless such furnace is so far as practicable capable of being operated continuously without emitting smoke;

(2) Any person who contravenes the provisions of this Section shall be liable to a penalty not exceeding ten pounds and any person who after there has been a conviction of an offence of installing a furnace in contravention of those provisions uses that furnace shall unless it has been altered so as to comply with those provisions, be liable to a penalty not exceeding two pounds for each day on which he so uses the furnace;

Provided that a person so using such furnace shall not be liable to the last-mentioned penalty unless he himself was convicted of the said offence or if he was not so convicted unless prior to such use or the continuance of the use he had received notice from the Corporation that there had been a conviction in respect of the installation of such furnace.

2. Nothing in this Section or in the said Section 36 shall apply to the installation of a furnace in—

(a) a house or flat unless the furnace is intended to be used for the heating of more than one house or flat; or

(b) a building previously used as a single house which has been converted into two or more separate houses or flats.

3. For the purposes of this Section the expression "house" shall include a house of which part is licensed by the justice for the sale of intoxicating liquor pursuant to the Licensing Acts, 1910 to 1949, notwithstanding that the premises are so licensed provided that the house is not designed and is not being adapted to provide more than three bedrooms for visitors or guests.

4. Before the Corporation serve a notice under Subsection (3) of the said Section 36 as amended by this Section stating that they are not satisfied that a furnace is so far as practicable capable of being operated continuously without emitting smoke, the Corporation shall consult with the Minister of Fuel and Power.

The principal effect of this amendment was to bring within the scope of approval of new furnace installations, any furnace whether inside or outside building, and whether for steam-raising or not. A code of requirements was formulated, which whilst not having the force of law, was applied as far as practicable to all new furnace installations. Other local authorities subsequently obtained comparable powers.

Somewhat similar provisions are included in Section 3, Clean Air Act, 1956, but this latter Section, unlike the Manchester Corporation Acts, 1946 and 1950, excludes from its purview the installation of smaller furnaces designed solely or mainly for use for domestic purposes, not being furnaces or boilers with a maximum heating capacity of 55,000 or more British thermal units per hour. The official memorandum on the Clean Air Act includes notes dealing with applications for approval under Section 3, and embodies some of the Manchester requirements.

It has been the practice of the Department to obtain knowledge of new installations during visits to plant by the inspectors or by intimation from the City Architect when plans are submitted to him which indicate that boilers, furnaces, flues or chimneys are to be constructed. An additional safeguard is now included in Sub-section (3) of Section 3, Clean Air Act, 1956, which makes it an offence for any boiler or plant included in the Section to be installed without notice of the proposal to instal it having been given to the local authority.

Although there are frequent discussions between industrialists, consultants and the Department regarding furnace installations, official approval is not obligatory under either the Manchester Corporation Acts, 1946, and 1950, or under Section 3, Clean Air Act, 1956, the only necessary condition being that the plant shall be smokeless as far as is practicable. Twelve official notices of approval were granted during the year.

During the year an important decision on fuel policy was made by the City Council when the principle was accepted that in future the central heating of Corporation buildings other than houses or flats should be by gas or electricity. This will eliminate smoke and virtually sulphur dioxide and will avoid the necessity of high chimneys in new buildings.

It was estimated that the use of gas or electricity would usually cost between 50 per cent. and 100 per cent. more than solid smokeless fuel or fuel oil but as expressed in the report of the General and Parliamentary Committee, the point at issue was whether on broad considerations of public policy it was justifiable to incur such additional expense for the purpose of attaining all the objects referred to above.

Smokeless Zones

Manchester Corporation Act, 1946, Section 35

The Corporation obtained powers under the above Section to declare the central area of the City a smokeless zone, and to declare other areas to be smokeless zones, subject to the approval of the Minister of Housing and Local Government. The central area of the City was declared a smokeless zone as from May 1st, 1952, and this was subsequently extended so that the smokeless central zone now covers an area of about 412 acres.

In accordance with the policy of the Corporation, redevelopment areas are declared smokeless zones whilst the sites are being cleared, so as to ensure that smoke will not be emitted from new buildings when erected. Smokeless zones have previously been established in five such areas and in September, 1956, the Minister of Housing and Local Government confirmed orders made by the Corporation regarding the following redevelopment areas at Wythenshawe taking effect as from 1st April, 1957:—

1. Gardener's Arms area

Area within the boundaries of Wythenshawe Road and its junction with the eastern boundary of the curtilage of the dwelling-house known as Ivy Cottage, Wythenshawe Road, thence in north westerly direction to Baguley Brook, along Baguley Brook in an easterly direction to the north western boundary of the curtilage of the Gardener's Arms, thence along this boundary to its junction with Wythenshawe Road and in a westerly direction along Wythenshawe Road to the point of commencement.

This area comprises 2.78 acres of land on which the Housing Committee intend to build 59 dwellings comprising houses, flats, upper and lower maisonettes. The heating appliances in each dwelling will be capable of burning solid smokeless fuel and will be provided with gas ignition.

2. Royle Green Road area

Area within the boundaries of Longley Lane and the junction with the south eastern boundary of the curtilage of the dwelling-houses known as "Peascroft," thence along this boundary in north easterly direction to the southerly boundary of the bowling green at the rear of the John Carter Public House, Royle Green Road; to the rear boundary of the curtilage of the premises numbered 54, 56, 58, 60, Royle Green Road, along southern boundary of 60, Royle Green Road to Royle Green Road, thence south east to south eastern boundary of the curtilage of the house known as "Sunbre," situated in Royle Green Road along the southern boundary of the curtilage of "Sunbre," thence along the southerly boundary of the curtilage of the premises known as Gresty's Nursery to the Northenden By-Pass, thence in a south westerly direction along Longley Lane and in a north westerly direction to the point of commencement.

This area comprises 10.63 acres of land on which the Housing Committee intend to build 193 dwellings comprising houses, flats and lower maisonettes. The heating appliances in each dwelling will be capable of burning solid smokeless fuel and will be provided with gas ignition.

With a view to helping tenants of the new accommodation to get the best use from the suitable approved firegrates burning coke, a leaflet, prepared with the co-operation of the Housing Department, is issued to each tenant on taking possession. In addition, the North Western Gas Board and the North Western Electricity Board are informed that these areas have been declared smokeless zones so as to ensure priority for the necessary supplies. Similarly the Fuel Overseer is informed of the smokeless zone orders so as to facilitate registration for fuel supplies by the occupiers of premises in the area.

The Clean Air Act, 1956, now enables any local authority to establish 'smoke control areas,' subject to the consent of the Minister of Housing and Local Government and contains rather a significant difference from the smokeless zone provisions of the Manchester Corporation Act, Section 35, in that an exchequer contribution becomes available to the Corporation toward the cost of approved expenditure at dwellings in the conversion of appliances to smokeless operation. It will be recollected that under the Manchester Corporation Act, the Corporation may contribute the whole or part of the expenses necessarily incurred by any person in converting to smokeless operation if provision is not made for any Exchequer contribution to the Corporation for that expenditure. Further, under the Clean Air Act it is obligatory that the owner or occupier of the dwelling subject to a smoke control order shall be paid seven-tenths of the expenditure he has incurred on such work of conversion.

Another difference is that Section 11 of the Clean Air Act, 1956, whilst prohibiting smoke emission in 'smoke control areas' provides that it shall be a valid defence if it can be proved that the smoke was caused by the use of "authorised fuel." "Authorised fuels" are defined in The Smoke Control Areas (Authorised Fuels) Regulations, 1956, as:—

Anthracite, briquetted fuels carbonised in the process of manufacture, coke, electricity, gas, low temperature carbonisation fuels, low volatile steam coals.

A report on a proposed 'smoke control area' in Hulme has been prepared for consideration by the Health Committee and submission to the Ministry. The area includes land to be redeveloped following clearance of unfit properties and acquisition by the Corporation under compulsory purchase orders.

An impediment to the rapid extension of either smokeless zones or smoke control areas in the built-up areas is the formidable cost of providing new appliances or adaptations of existing appliances. Clearly, if a smokeless fuel could be manufactured capable of being burned easily in existing appliances, available at a price competitive with coal and accepted by the tenant to be reasonable, much greater and speedier progress could be made.

Occupiers in the smokeless zones continued to co-operate with the smoke prevention policy of the Corporation and no case of deliberate infringement of the Act occurred.

Recording of atmospheric pollution

Investigations on the measurement of atmospheric pollution are carried out by the Department of Scientific and Industrial Research which endeavours to standardise the methods used by the various co-operating bodies so that the records of observations can be directly compared. The greater number of systematic observations on pollution are made by local authorities, who forward the results for co-ordination and publication to the Department of Scientific and Industrial Research.

For the purposes of standardisation and measurement, atmospheric pollution is classified as (a) deposited matter, (b) smoke, (c) sulphur dioxide.

Pollution falling from the air to the ground is measured by deposit gauge at seven different points within the City and for the purpose of comparison an additional gauge is at Knowle House, Handforth, outside the City boundary. The deposit gauge is a useful instrument in providing some method of ascertaining the degree of all types of pollution, but the relative proportions which are collected by the gauge may not correspond with those which are actually emitted into the atmosphere. In addition, meteorological conditions may cause variations in the material collected and therefore long periods of observations are necessary before reliable conclusions can be drawn. The table which follows sub-divides the matter collected by the gauge into soluble and insoluble matter. It will be seen that the average for all gauges indicates a slight reduction compared with the average of the five preceding years. There was a decrease at each individual station with the exception of that at Philips Park where it will be noted that the increase was due to a rise in insoluble matter. This gauge is located in an industrial district in close proximity to a large power station and gasworks.

1956

Deposited atmospheric pollution

(Tons per square mile)

Monthly averages together with the averages for the previous five years

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1956	Five yearly average	1956	Five yearly average	1956	Five yearly average	1956	Five yearly average
Baguley	2.8	2.5	5.10	6.27	6.05	6.52	11.15	12.7
Booth Hall	3.3	2.9	9.52	9.69	7.20	7.08	16.72	16.7
Heaton Park ..	3.3	3.0	6.15	7.23	6.09	6.64	12.24	13.8
Monsall	3.0	2.7	11.22	12.22	8.64	8.15	19.86	20.3
Philips Park ..	3.2	2.8	27.70	24.24	10.97	10.69	38.67	34.9
Rusholme	3.1	2.8	13.14	13.46	8.85	8.72	21.99	22.1
Withington	2.7	2.5	9.27	11.13	6.81	6.51	16.08	17.6
Average for all gauges	3.0	2.7	11.73	12.03	7.80	7.76	19.53	19.7

Station at Knowle House, Handforth

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1956	Five yearly average	1956	Five yearly average	1956	Five yearly average	1956	Five yearly average
Knowle House ..	2.6	2.5	4.22	3.95	4.60	4.95	8.82	3.9

Sulphur pollution

(Measurements by the lead peroxide method)

Weight in milligrams SO_2 per 100 square centimetres exposed surface per day

Monsall		Rusholme		Withington	
1956	Five yearly average	1956	Five yearly average	1956	Five yearly average
3.54	3.96	2.27	2.44	1.48	1.62

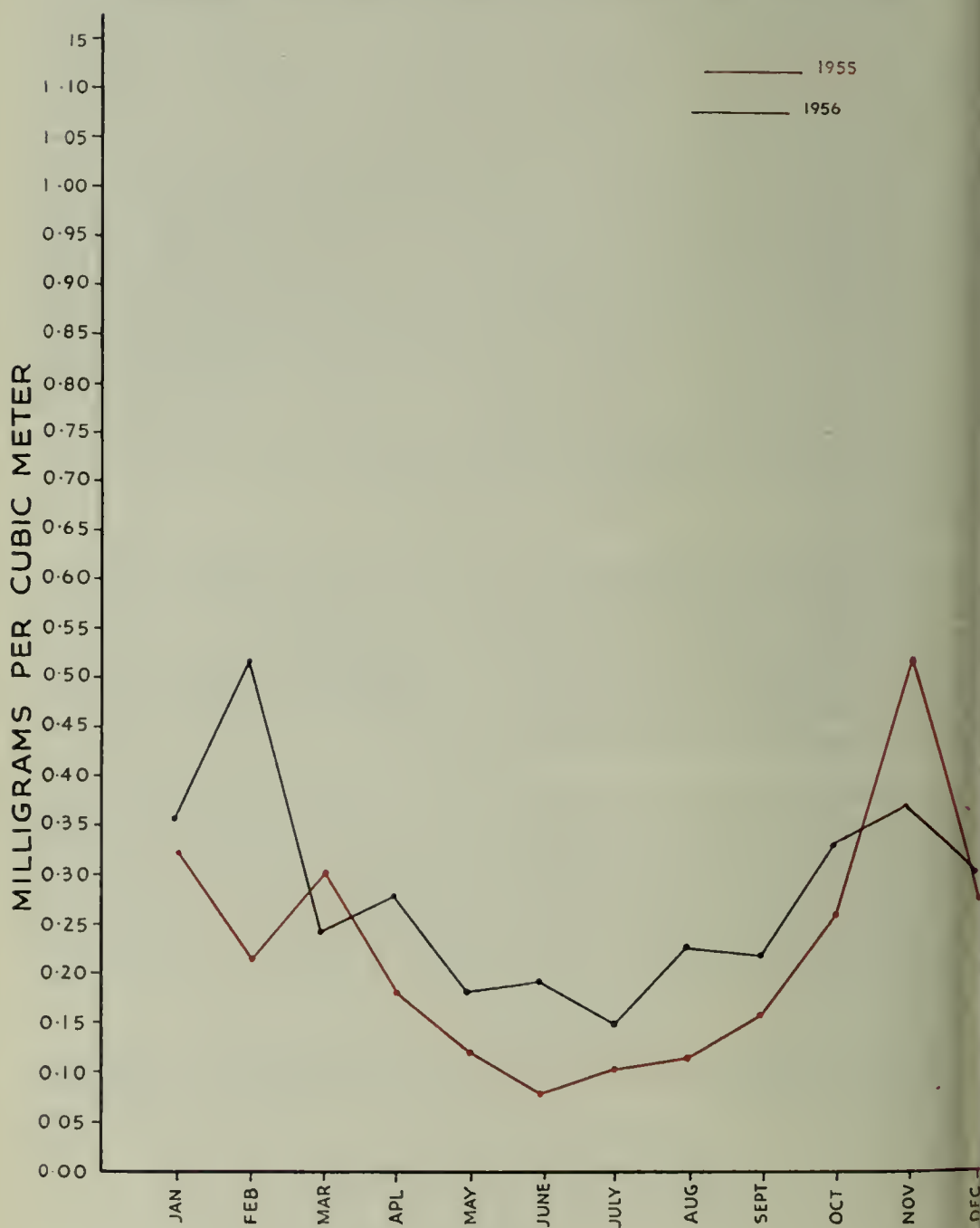
Matter which is too fine to fall by gravity, and remains suspended in the air can only be measured by drawing a quantity of air through a filtering medium so that the solid matter retained on the filter can be determined—generally according to the degree of intensity of the stain made on the filter. With such an apparatus it is usual to pass the filtered air through a solution of hydrogen peroxide so that any sulphur dioxide in the air sample is converted to sulphuric acid. The results are expressed as an average concentration of sulphur dioxide in parts per million of air, or milligrams of smoke per cubic metre of air. Sulphur pollution is also estimated by the lead peroxide instrument which apparatus gaseous sulphur dioxide combines with solid lead peroxide to form lead sulphate. The weight of lead sulphate formed provides an index of the average concentration of sulphur dioxide in the air in the vicinity of the apparatus.

The previous tables indicate that there was a slight decrease in sulphur pollution measured by the lead peroxide method at all three stations compared with the average of the five preceding years. Similarly there is a reduction in measured smoke and sulphur dioxide pollution during the summer months at Rusholme where there is a combined smoke filter and volumetric sulphur dioxide apparatus at the Public Analyst's Laboratory. It appears that this pollution arises from mainly domestic sources.

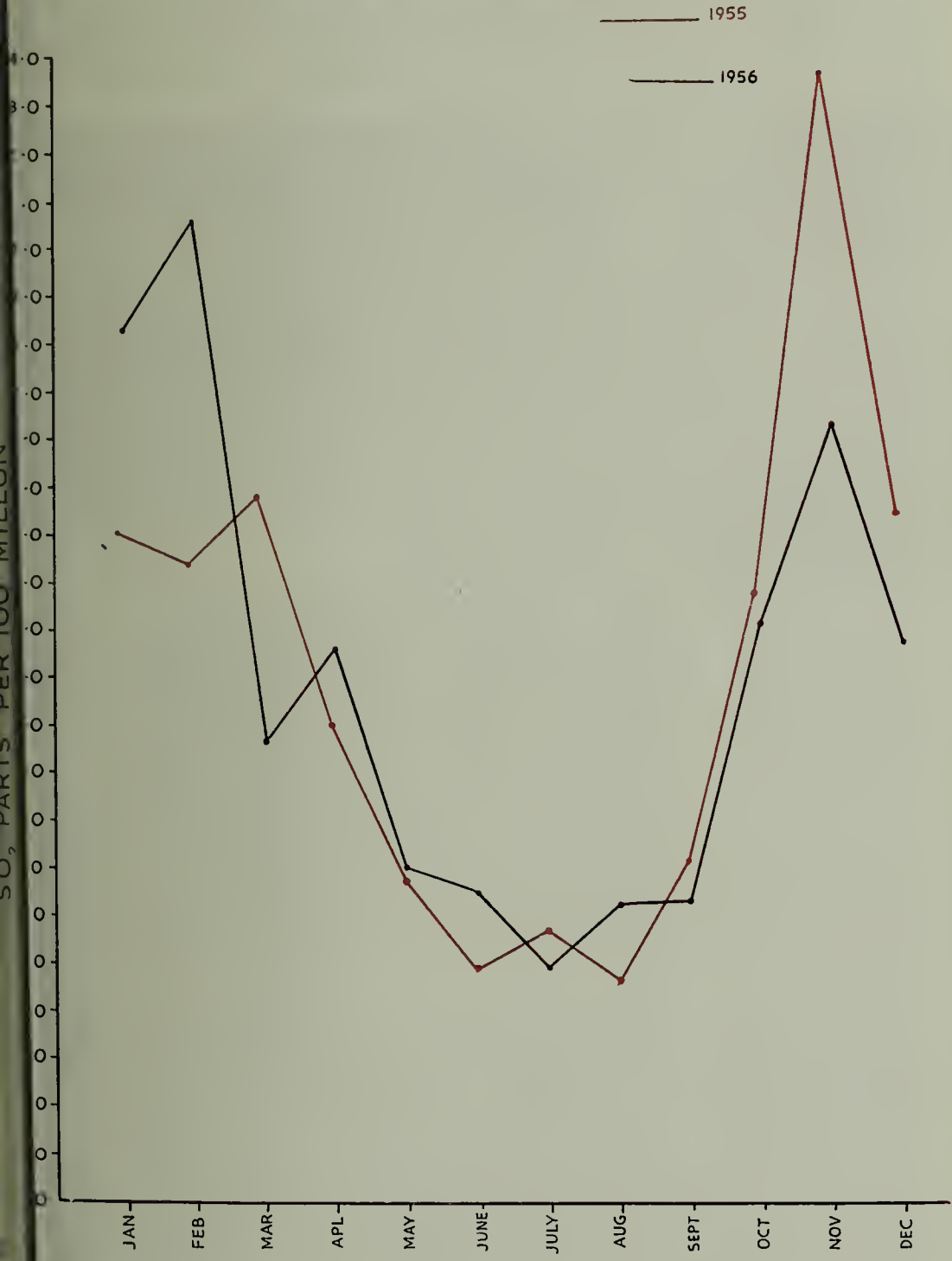
The heaviest smoke and sulphur dioxide pollution was measured on January 7th when it was estimated that 1.73 mg. of smoke per cubic metre of air and 97.5 parts of sulphur dioxide per hundred million parts of air were present during fog conditions. The lowest smoke pollution was measured on July 2nd, when it was estimated that only 0.043 mg. of smoke per cubic metre of air were present, and in regard to sulphur dioxide the lowest amounts measured were on July 2nd and July 5th, when 1.9 parts per hundred million of air were estimated.

The following graphs indicate the smoke and sulphur pollution measured at Rusholme by the combined smoke and volumetric sulphur dioxide apparatus during 1955 and 1956.

Yearly cycle of suspended impurity (smoke) at Rusholme—
monthly mean concentration in milligrams per cubic meter



Yearly cycle of sulphur dioxide by the volumetric method—
monthly mean concentration at Rusholme
parts per hundred million



HOUSING CONDITIONS

Urgent attention continues to be given to secure the demolition of the irretrievably unfit structurally dangerous dwelling-houses, the maintenance in a weathertight state free from urgent nuisances of the large number of sub-standard unfit houses which ultimately are to be dealt with by clearance action, and the repair of other houses not irretrievably unfit together with the abatement of overcrowding, where it occurs.

Clearance areas

In accordance with the City Council's approved five-years programme the Minister of Housing and Local Government confirmed the following housing compulsory purchase orders subject to minor modifications of the order originally made by the Council.

St. George's Housing Compulsory Purchase Order, 1955

This Order made by the City Council on the 27th May, 1955, dealing with 435 unfit dwelling-houses in the St. George's Clearance Areas, numbers 1 to 24, was confirmed by the Minister of Housing and Local Government on the 29th February, 1956, subject to certain modifications. The Minister excluded eight premises from the Clearance Areas but directed that such properties be included with the lands which the Council are authorised to purchase compulsorily outside the Clearance Areas under Section 27 of the Housing Act, 1936. The Minister also directed that payments under Section 42 of the Housing Act, 1936, shall be made in respect of four well-maintained houses.

The rehousing of the occupants of the unfit houses in these particular areas commenced during July and the demolition of the vacated houses began in September. 84 dwelling-houses have been demolished, 219 families have been rehoused by the Corporation and 9 families have found their own rehousing accommodation.

Miles Platting Housing Compulsory Purchase Order, 1955

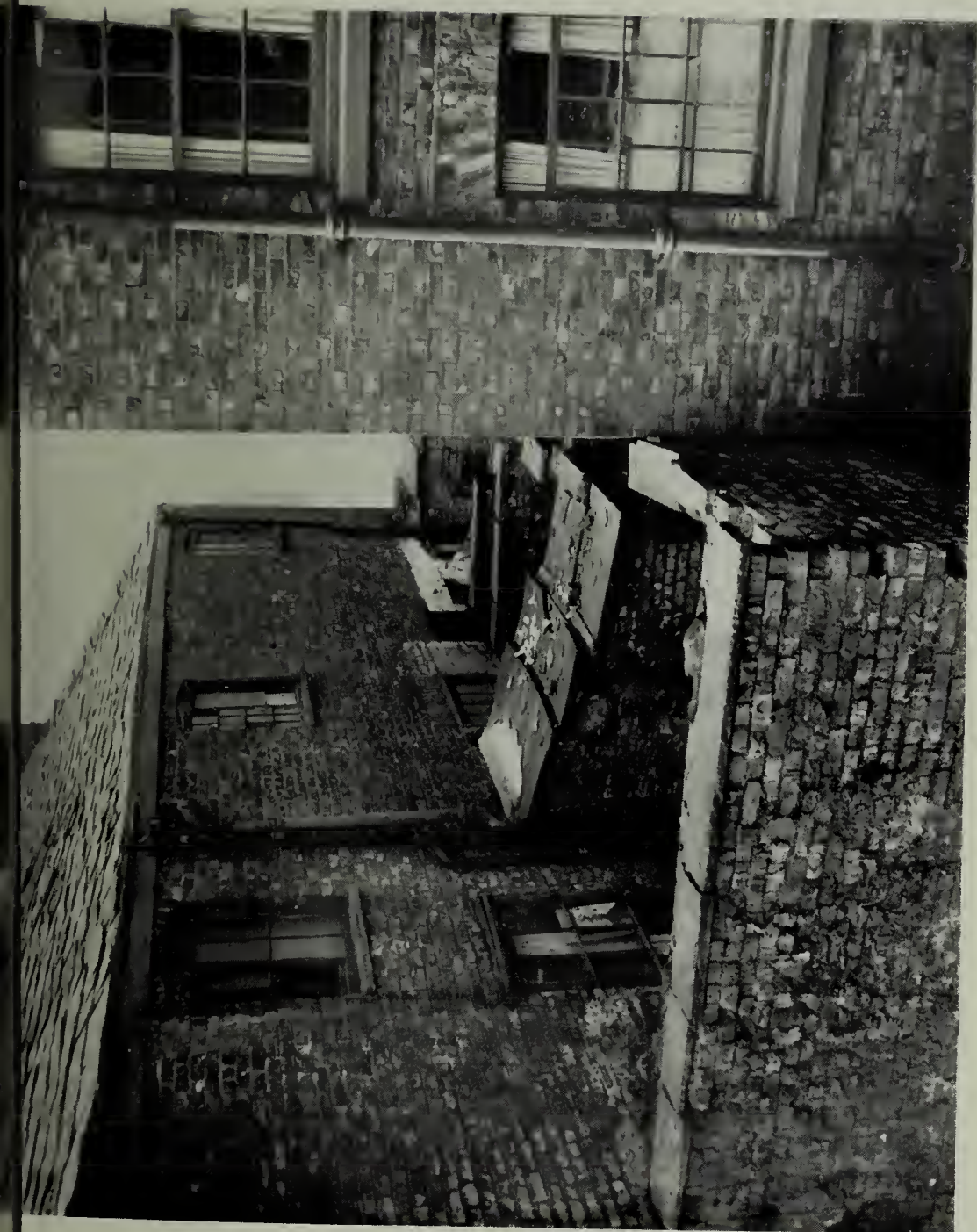
722 houses were included in this Order made by the City Council on the 2nd August, 1955, and following a local public inquiry on the 17th to 19th January, 1956, the Minister confirmed the Order on the 18th June, 1956, with modification so far as the Clearance Areas were concerned. It was directed, however, that payments be made by the Council in respect of six well-maintained houses.

The rehousing of the occupants of houses in these Areas commenced during November whilst the demolition of the vacated houses began during December and 8 houses have been demolished. 52 families were rehoused by the Corporation and one family found its own rehousing accommodation.

Mill Street (Ancoats) Housing Compulsory Purchase Order, 1955

559 houses were included in this Order made by the City Council on the 26th September, 1955. A local public inquiry was held on the 28th February, 1956, and the Minister confirmed the Order on the 23rd July, 1956, with minor modification but directing that the property concerned be included with the lands which the Council are authorised to purchase compulsorily outside the Clearance Areas.

During the year 23 structurally dangerous and unfit houses were demolished, 38 families have been rehoused by the Corporation and 2 families found their own rehousing accommodation.



Unfit houses



Unfit houses

Harpurhey Housing Compulsory Purchase Order, 1955

234 houses were included in this Order made by the City Council on the 19th December, 1955, and a local public inquiry was held on the 24th April, 1956. The Minister confirmed the Order on the 16th October, 1956, excluding three premises from the Clearance Area and directing that the properties be included in the lands which the Council are authorised to purchase compulsorily outside the Clearance Area. The Minister also directed that payments under Section 42 of the Housing Act, 1936, shall be made in respect of two well maintained houses.

During the year 34 structurally dangerous and unfit houses were demolished; 3 families were rehoused by the Corporation and 1 family found their own housing accommodation.

Bradford Road Clearance Areas numbers 1 to 9, 1956

The remaining portion of the Bradford Road, Ancoats, district originally declared to be Clearance Areas on the 28th July, 1937, was again surveyed and an official representation dated 12th April, 1956, involving 954 unfit houses, was submitted to the Health Committee and later declared to be Clearance Areas by the City Council.

Since the date of representation 25 structurally dangerous and unfit houses have been demolished, and 26 families have been rehoused by the Corporation.

Collyhurst Street Clearance Areas numbers 1 to 10, 1956

The inspection and survey of part of the Collyhurst district was completed during the year and an official representation dated 14th July, 1956, involving 954 unfit houses was submitted to the Health Committee and later declared to be Clearance Areas by the City Council.

Since the date of representation, 6 structurally dangerous and unfit houses have been demolished and 7 families have been rehoused by the Corporation.

The total number of unfit dwelling houses in the St. George's, Miles Platting, Mill Street, Harpurhey, Bradford Road and Collyhurst Street Clearance Areas as at the 31st December, 1956, was 3,241.

Highway Street (Ancoats) Housing Compulsory Purchase Order, 1953

The 63 vacant houses remaining in the area were demolished and cleared during the year.

Demolitions

The number of houses demolished during the year in the post-war clearance areas was 243 and the Corporation rehoused 368 families whilst 13 other families found their own alternative accommodation.

In addition 9 houses were demolished and 17 families were re-housed in the pre-war clearance areas of St. George's (part only), Hutchins Street, Monday Street, Ruth Court, Enoch Street, Fog Lane and Oldham Road (New Cross).

The Orders made by the Corporation in respect of the pre-war areas were not confirmed by the Ministry because of the outbreak of hostilities and they have remained in abeyance.

War damage, instability and serious disrepair have resulted in the demolition of 891 houses in these pre-war areas but 732 houses remain to be dealt with.

Housing Act, Section 11, Manchester Corporation Act, 1946, Section 31

The Corporation's approved programme anticipates that in 5 years 2,500 individually unfit and dangerous houses would require demolition additionally to those that are to be demolished under the Clearance Area procedure. During the year 897 individually unfit houses were certified by the City Architect to be dangerous and needing demolition which would entail the rehousing of 872 families.

In 1954 and 1955, 599 and 640 houses respectively were dealt with. The increased number of applications concerned with the demolition of individually unfit houses is indicative of the state of deterioration of aged, worn-out houses in the inner and older areas of the City. Further rapid deterioration is likely as the houses continue to age without maintenance. 1,036 of the unfit and dangerous houses were demolished, 704 families were rehoused by the Corporation and 31 families found alternative accommodation themselves. 12 houses vacated in previous years remain unoccupied and bricked up. Demolition of these at the present time is deferred as it would affect the stability of adjoining occupied premises.

Applications for rehousing on medical grounds

3,440 applications were dealt with. Medical evidence and correspondence from hospitals, welfare organisations and other similar bodies stressed the hardship and detrimental effect of substandard, damp and overcrowded conditions upon the health of the families concerned.

Each case was investigated for consideration by the Medical Officer of Health whose decision on the assessment of the circumstances was forwarded to the Director of Housing. 2,758 or 80 per cent. of the cases warranted priority or a preference in rehousing but because of the shortage of new houses there is unavoidable delay even with some of the most serious cases. 470 of the families were offered rehousing accommodation during the year.

Abatement of overcrowding

The records of the Department have not been reviewed as it was not practicable to make a comprehensive survey during the year but it is known that at least 2,338 dwelling houses were overcrowded according to the national standard and of these 116 were newly reported cases.

Approximate number of overcrowded houses	Number of families	Adults	Children
1,353 houses with 1 family	1,353	8,185	2,798
702 „ „ 2 families	1,404	4,836	1,529
202 „ „ 3 „	606	1,419	414
81 „ „ 4 or more families	347	820	334
2,338	3,710	15,260	5,075

1,353 of the above families are occupying houses which are too small for their requirements and 985 houses are overcrowded by reason of lodgers' families.

In all cases of overcrowding brought to the notice of the Department, the Director of Housing is informed if the tenant and/or lodger families are entered for a Corporation house.

Houses let in lodgings

The Department is aware of 1,049 houses being occupied in this manner, that is, with two or more lodger families, additional to the tenant family, but this number is not deemed to be the total of houses so used.

54 of the houses are without a resident occupier and correspondingly the provisions of Section 57 of the Manchester Corporation Act, 1950, are applicable in connection with the control and management of these "farmed" houses.

It has not been necessary to take formal action in respect of infringements of the standards prescribed by Section 9 of the Housing Repairs and Rents Act, 1954, which are concerned with natural lighting, ventilation, water supply, drainage and sanitary arrangements, facilities for the storage, preparation and cooking of food and the disposal of waste water. Defects noted were dealt with by informal action except in those cases where it was necessary to invoke the nuisance provisions of the Public Health Act, 1936, because of structural disrepair.

Action was taken at a house let in lodgings where two unfit underground basements were let to a family. The rooms were vacated and additionally the owner gave an undertaking not to re-let them for living or sleeping purposes.

Repairs

10,877 inspections were made to secure attention to disrepair of houses. Formal and informal action in accordance with the provisions of the Public Health Act, 1936, and local Acts resulted in 15,433 preliminary and statutory notices being served upon the owners of the premises concerned. 342 summonses also were issued followed in 189 instances by nuisance orders granted by the City Magistrates to ensure compliance with outstanding notices. Clearly the marked diminution in the volume of work associated with repair procedure is anticipated until the majority of the unfit houses have been demolished or otherwise dealt with.

Repairs to secure attention to structural, drainage or plumbing defects were carried out in default at 839 premises, including immediate temporary repairs necessary at 5 houses.

Emergency repairs were effected to public sewers receiving the drainage of 20 premises.

The cost of default works amounted to £8,535 17s. 6d., of which £1 18s. 7d. is recoverable from the respective owners of the properties, the balance was chargeable to the Highways Committee for work carried out in connection with public sewers under highways maintained by the Corporation.

Certificates of Disrepair (Housing Repairs and Rents Act, 1954)

20 applications for certificates were received from the tenants of houses. 5 certificates were issued and 43 certificates were revoked following applications by the owners after the execution of the repairs to remedy the defects specified in the certificates.

Housing Repairs and Rents Act, 1954

Applications for certificates of disrepair and for revocation of certificates

(a) Certificates of disrepair

Applications received				A Dwelling-houses which have been the subject of notice of repair increase of rent				B Dwelling-houses not subject to notice of repair increase but are subject under Rent and Mortgage Acts, 1920, S. 2 (1) (c) and (d)			
Total	Subject to notice of increase A	Not subject but in respect of Rent and Mortgage Acts B	Not valid or cancelled	Applications	Granted	Refused	Withdrawn	Applications	Granted	Refused	Withdrawn
				64	59	5	—	11	6	—	5
120	64	11	45								

(b) Revocations of certificates of disrepair

Dwelling-houses which have been the subject of notice of repair increase of rent				Dwelling-houses not subject to notice of repair increase but are subject under Rent and Mortgage Acts, 1920, S. 2 (1) (c) and (d)			
Applications	Granted	Refused	Pending	Applications	Granted	Refused	Pending
43	*43	1	1	1	1	—	—

* Includes 2 applied for in 1955.

Improvement or Conversion Grants (Housing Act, 1949), Housing Repairs and Rents Act, 1954

A local authority may assist a private owner to modernise his house by making a grant to improve or convert the house provided it is suitable and has a useful life of more than fifteen years.

To obtain a grant the authority must be satisfied that when the proposed work has been done the dwelling will:—

- (1) be in a good state of repair and substantially free from damp;
- (2) have each room properly lighted and ventilated;
- (3) have an adequate supply of wholesome water laid on inside the dwelling;
- (4) be provided with efficient and adequate means of supplying hot water for domestic purposes;
- (5) have an internal or otherwise readily accessible watercloset;
- (6) have a fixed bath or shower, preferably in a separate room;
- (7) be provided with a sink or sinks with suitable arrangements for the disposal of waste water;
- (8) have a proper drainage system;
- (9) be provided in each room with adequate points for gas or electric lighting (where reasonably available);
- (10) to be provided with adequate facilities for heating;
- (11) have satisfactory facilities for storage, preparing and cooking of food;
- (12) have proper provision for the storage of fuel where required.

Applications for grants are dealt with by the Director of Housing and in each case he seeks the views of the other Departments concerned regarding the suitability of the premises for improvement prior to the application being considered by the Housing Committee. 91 such cases, principally from owner/occupiers, were referred to this Department during the year. 18 were in respect of the conversion of larger type houses into flats and 73 for the modernisation of older houses by way of additional facilities such as the provision of bathrooms, hot water supply, etc., but adverse reports had to be given in 33 cases as the houses concerned were not deemed suitable for improvement by reason of unfitness, bad arrangement or limited residual life and would not comply with the prescribed standards of the Act.

Common lodging houses

The Public Health Act defines a "common lodging house" as a house other than a public assistance institution, provided for the purpose of accommodating night, poor persons not being members of the same family, who resort thereto and are allowed to occupy one common room for the purpose of eating or sleeping.

There are now 8 common lodging houses, 7 providing accommodation for 1,385 men and one owned by the Department with accommodation for 210 women. The Department also owns one of the houses which has accommodation for 464 men. One house which had accommodation for 63 men was discontinued during the year.

The common lodging houses are regularly visited by the district public health inspectors in order to secure compliance with statutory and byelaw provisions relating to sanitary accommodation, water supply, washing facilities overcrowding, cleanliness and the prevention of the spread of infectious diseases and vermin infestation.

Special care is exercised by the keepers in regard to verminous conditions and 121 men and 12 women from these houses were cleansed and their clothing disinfested at the Corporation's Clinic at Monsall Disinfecting Station.

Movable dwellings

16 different sites were reported to have been used by caravan dwellers during the year including 7 not previously known to have been so used. In each instance statutory nuisances arose, and it was necessary to take informal action in 53 cases and serve abatement notices on 101 caravan occupiers. Ultimately court proceedings were instituted in 24 cases, orders being made or penalties imposed except in 9 instances when the offenders complied with the earlier orders concerned before the date of the hearing. Recurring difficulties on another site ceased with the transfer of ownership of the land which was fenced off by the new owner.

The sporadic, temporary occupation of private land by nomadic caravan dwellers has always been found to occur in the City, but in recent years more prolonged stays on unsuitable sites by colonies of caravan dwellers have created most unsatisfactory and insanitary conditions. 39 sites adjacent to dwelling houses, commercial or industrial premises in built-up districts are known to have been so used in recent years, some frequently and with one exception so far as could be ascertained, without the consent of the land owners. The resultant conditions, particularly those arising from the absence of sanitary accommodation, water supply and refuse accommodation on the sites, repeatedly become the subject of action under the nuisance provisions of the Public Health Act, 1936 with the service of abatement notices, but neither that procedure nor the application of sections 268 and 269 of the Public Health Act offers effective measures to deal with the problem.

Accordingly, the Corporation successfully sought further powers which are contained in Part IV of the Manchester Corporation Act, 1956.

Section 17 deals with the prohibition of movable dwellings without the consent of the Corporation, as follows:

"17—(1) No movable dwelling shall be placed or kept on any land situated within the city without the previous consent of the Corporation.

(2) It shall not be lawful for any person without the previous consent of the Corporation to let or permit to be used any land so situated for occupation by any movable dwelling unless to the satisfaction of the Corporation—

- (i) the surface of the land is covered with concrete or other suitable material; and



Insanitary Caravan Site

- (ii) the land is provided with sufficient roads, sanitary accommodation, drains and sewers, and is furnished with a separate supply of water.

(3) Where under subsection (1) or subsection (2) of the section an application is made to the Corporation for their consent the Corporation shall be deemed to have withheld their consent unless within four weeks from the receipt of the application they give notice to the applicant stating that such consent is granted."

Rights of appeal are made available to the magistrates' court.

In addition, Section 18 provides that the magistrates' court may prohibit movable dwellings in certain areas:

'18—(1) Where it appears to the Corporation—

- (a) that a movable dwelling is in such a state or so overcrowded as to be prejudicial to the health of the inmates; or
- (b) that by reason of the absence of proper sanitary accommodation or otherwise the use of a movable dwelling gives rise whether on the site or on other land to a nuisance or to conditions prejudicial to health; or
- (c) that in connection with the use of a movable dwelling (i) no suitable provision is made for the disposal of refuse or offensive matter or liquid or (ii) a supply of wholesome water in a suitable and readily accessible place is not available; or
- (d) that the amenities of any part of the city are prejudicially affected by conditions arising from any movable dwelling or movable dwellings in the city; or
- (e) that annoyance is caused to the residents in or visitors to any part of the city by reason of the noisy indecent or other offensive conduct of the occupiers of or persons frequenting any movable dwelling or movable dwellings in the city;

the Corporation may make complaint to a magistrates' court, and the court may order—

- (i) require the removal by the occupier or occupiers thereof within such period as may be prescribed by the order of the movable dwelling to which the complaint relates; and
- (ii) prohibit the use for human habitation of the movable dwelling to which the complaint relates at such places or within such area as may be specified in the order.

Section 3 prescribes penalties not exceeding ten pounds, and a maximum daily penalty of five pounds, and also provides that on failure to comply with the Court order the Corporation may enter on the land and remove the movable dwelling.

The Corporation and any person aggrieved by any order made by the magistrates' court may appeal to quarter sessions.

Canal boats

The living accommodation on canal boats used for the conveyance of goods and plying on canals within the City is supervised under the provisions of the Public Health Act, 1936, and Regulations made in 1878 under the Canal Boat Act with minor amendments in 1925 and 1931.

209 inspections were made and generally conditions did not contravene the prescribed standards. It was, however, necessary to serve 8 Nuisance Abatement notices concerned with absence of certificates, marking, overcrowding, painting and general defects. 3 of these notices were complied with before the end of the year.

There are now 179 boats on the register, 2 new boats being registered during the year and 24 were removed on inquiries confirming that they were no longer in being.

Whilst the Manchester canal carrying companies maintain their practice of not allowing women and children to reside on their boats, if other canal boats in which women and children do live reach the canals within the City the occupiers are advised as to the welfare services available.

No cases of infectious disease were reported as having occurred on canal boats within the City.

OCCUPATIONAL CONDITIONS

Factories

Factories Act, 1937—inspections of mechanical and non-mechanical factories, etc.

Premises	Number on register	Inspections	Number of written notices	Occupiers prosecuted
(i) Factories in which Sections 1, 2, 3, 4 and 6 are enforced by local authorities	497	20	—	—
(ii) Factories not included in (i) in which Section 7 is enforced by the local authority	4836	870	13	—
(iii) Other premises in which Section 7 is enforced by the local authority (excluding outworkers premises)	119	49	—	—
Totals	5452	939	13	—

Cases in which defects were found

Particulars	Defects				Number of cases in which prosecutions were instituted
	Found	Remedied	Referred to H.M. Inspector	by H.M. Inspector	
Amount of cleanliness (Section 1)	7	4*	—	7	—
Overcrowding (Section 2)	—	—	—	—	—
Unreasonable temperature (Section 3) . .	—	—	—	—	—
Inadequate ventilation (Section 4)	—	—	—	—	—
Insufficient drainage of floors (Section 6)	—	—	—	—	—
Sanitary conveniences					
(a) Insufficient	6	—	—	6	—
(b) Unsuitable or defective	101	32†	—	100	—
(c) Not separate for sexes	12	3‡	—	12	—
Other offences against the Act (not including offences relative to outworkers)	2	—	2	—	—
Totals	128	39	2	125	—

* Included 2 from previous years.

† Included 21 from previous years.

‡ Included 2 from previous years.

Factory outworkers

Supervision of premises in which specified classes of outwork are carried out is exercised under the provisions contained in the Factories and Public Health Acts, dealing with the employment of persons in unwholesome premises and the prevention of the spread of infectious disease.

There was a further reduction in the number of outworkers engaged by factory employers in the City, 2,574 being employed by 402 firms, as compared with 2,778 and 414 in 1955 and 3,081 and 469 in 1954. 851 outworkers employed in Manchester factories reside outside the City boundary, and the various local authorities concerned were notified. Information was also furnished by local authorities regarding 31 outworkers employed by firms in their areas and residing in Manchester.

As last year the reduction of outworkers is mainly in the clothing trade where 1,144 were employed as compared with 1,532 in the previous year and 1,778 in 1954. Other trades employing outworkers were umbrellas (179), soft furnishings (164), household linen (61), soft toys (4) and lampshades (1).

Inspection of outworkers' homes showed that a satisfactory standard of cleanliness was maintained and no case of infectious disease was reported.

The occupiers of 2 factories were found to be failing to keep the prescribed numbers of outworkers as required by the Act, but these omissions were remedied on request.

Shops and employment of young persons

The provisions of the Shops Act, 1950 are administered by the Department except for those concerned with evening and Sunday closing of shops which are dealt with by the City Police.

The district public health inspectors made 1,622 visits and in 36 instances informal action was necessary to secure compliance with statutory requirements. 16 of these were concerned with the display of the necessary forms as regards assistants half holiday, employment of young persons, seats for shop assistants and Sunday trading. The other cases were concerned with the health and comfort provisions of the Act and attention was required to the maintenance of suitable temperature (2), sanitary conveniences (14) and washing facilities (6). Legal proceedings were instituted in the case of the occupier of a boot and shoe shop which was kept open on the day of the compulsory weekly half holiday and also did not exhibit a notice stating that the shop was closed except for the sale of certain articles as required by the Manchester Closing Order No. 10. The occupier was fined £1 in each case.

295 persons are registered under the special provisions for those observing the Jewish Sabbath, waiving otherwise compulsory closing on Sundays. The new applications were granted and there was one cancellation.

Exemption from the half day closing at four exhibitions under the provisions of Section 42 of the Act was sought and granted to the promoters, the retail trade clearly being subsidiary or ancillary to the main purpose of the particular exhibitions.

The Government introduced the Shops Bill directed to implementing the closing hour and related recommendations of the Gowers Committee on Closing Hours of Shops published in 1947, but legislation previously anticipated that environmental conditions in non-industrial occupations remained outstanding except for certain agricultural occupations. Here the responsibility of local government has been limited to administration of provisions dealing with sanitary accommodation while those requiring washing facilities are deemed to be a more appropriate executive function of central government!

GENERAL SANITARY CONDITIONS

Infectious diseases

The district public health inspectors investigated the circumstances of 1,700 cases of the following notifiable infectious diseases:—acute encephalitis, acute poliomyelitis, cerebro spinal fever, diphtheria, dysentery, erysipelas, para-typhoid fever and scarlet fever.

Their enquiries as to possible source of infection and to ensure isolation together with measures to prevent the spread of infections entailed 1,888 visits.

Rodent Control

The Prevention of Damage by Pests Act, 1949, requires every local authority to ensure that as far as practicable its district is kept free from rats and mice.

For that purpose rodent operators are employed under the supervision of the Rodent Executive Officer and an assistant to investigate notifications and complaints in addition to maintaining a continuous survey of the City. In the course of the obligatory survey 77,810 premises were visited.

Owners and occupiers are required to notify any substantial infestation to the local authority and are responsible for any eradictory measures required by the Act. Similarly, the local authority is responsible for the repression of rodents on land in its own occupation.

Complaints of infestation

During the year 3,328 (3,346 in 1955) complaints were received concerning suspected infestations not previously known to the Department. Investigation of complaints has revealed the infestations to be greatest in the more central older areas where there is the largest amount of dilapidated properties and associated defects in the drainage systems.

Only 6 infestations were of a major character.

16,882 premises (12,528 dwelling-houses and 4,354 business premises) were visited on complaints of infestations.

Rat infestations were found at 1,949 premises (1,363 dwelling-houses and 586 business premises) and mice at 2,756 premises (1,952 dwelling-houses and 804 business premises).

The nature of the premises concerned is indicated below.

Nature of premises infested

Type of premises	Number of premises				
	Rat infested			Mice infested	Totals
	Internal	External	Total		
Dwelling-houses	525	838	1,363	1,952	3,315
Factories, workshops, workplaces	118	25	143	150	293
Shops	59	25	84	94	178
Premises where food is prepared, sold or stored	76	24	100	186	286
Warehouses	54	1	55	61	116
Offices	30	2	32	124	156
Restaurants, licensed premises, clubs ..	21	9	30	21	51
Hospitals, welfare centres, public institutions	14	5	19	48	67
Schools	17	7	24	95	119
Churches	6	3	9	4	13
Ranges, wooden structures	2	30	32	7	39
Cinemas, theatres, public halls	8	—	8	5	13
Waste disposal works, slaughterhouses, abattoirs	—	1	1	1	2
Parks, sports grounds	2	6	8	1	9
Ports	1	5	6	1	7
Quarries	—	27	27	1	28
Bus station	1	—	1	1	2
Sheds	—	6	6	—	6
Unoccupied property	1	—	1	4	5
Totals	935	1,014	1,949	2,756	4,705

Causes of infestations

Whilst the presence of rats may arise from numerous different causes as shown in Table II, the main sources of infestation in the built-up areas are sewers and drains.

Defective drainage becomes of especial significance to infestation when associated with other relatively common structural deficiencies, such as missing or broken basement windows or floor space ventilators and short doors. In addition, in the total number of premises found to be rat-infested, more than 49 per cent. could be attributed to a failure of occupiers to practise elementary hygiene in the protection of food or the proper disposal of food debris, thereby inviting the establishment of infestations. This feature is even more evident in relation to mice infestations of dwelling-houses.

Classification of causes of rat infestation in premises primarily visited during 1956

Cause	Rat-infestation				Total premises rat-infested	Percentage of total rat-infested	Premises infested
	Internal		External				
	Business premises	Dwelling-houses	Business premises	Dwelling-houses			
Directly due to or associated with defective or disused drains or sewers A	53	109	55	242	459	23.55	—
Nature of business in premises or vicinity B	93	4	19	1	117	6.0	24
Tips, refuse accumulations, market areas C	29	17	10	26	82	4.2	3
Neglect in protecting food and food scraps D	221	302	45	401	969	49.7	2,4
Poultry kept E	—	1	2	20	23	1.18	—
Dilapidated premises, defects in structures F	5	16	—	8	29	1.48	—
Building operations, demolitions G	1	9	3	14	27	1.38	—
Vicinity of open or culverted watercourses H	13	5	3	24	55	2.87	—
Railway sidings I	2	7	—	8	17	0.87	—
Casual infestation J	13	35	14	109	171	8.77	—
Totals	430	505	151	863	1,949	100.00	2,7

Extermination service of the Department

The service available from the Department is increasingly known and used by owners and occupiers of infested premises. No charge is made in respect of dwelling-houses, but where the treatment is undertaken at business premises at the request of owners or occupiers, the cost, based on the operator's time and material used, is recovered from the persons concerned.

The methods of treatment are in accordance with the standard guidance issued by the Ministry, with the anti-coagulant "Warfarin" continuing to be the rodenticide most extensively used.

3,963 premises were treated as follows:—

- 1,146 (28.92 per cent.) for rats.
- 2,817 (71.08 per cent.) for mice.
- 3,732 treatments were by poisoning (3,639 by “ Warfarin ”).
- 51 by trapping.
- 109 by combination of poison and trapping.

In the course of these treatments 52,957 baits, including preliminary and test baits, were laid; 42,976 of these were poison baits, of which 21,951 (51.08 per cent.) were taken.

Termination by private operating companies

Treatment of infestations, mainly of business premises, continues to be carried out by private operating companies and other individuals on a contractual basis with owners and occupiers. It is not obligatory nor customary for such operators to notify the Department when their services are being used and generally, unless encountered in the course of a survey, the Department is not informed of their activities.

Termination by other Corporation departments or nationalised undertakings

Other departments of the Corporation and nationalised undertakings dealing with infestations of their particular premises and reports received indicate that during the year a total of 721 poison baits were laid, of which 572 baits were taken. Whilst the actual number of rodents killed by these and additional measures adopted, e.g. trapping, cannot be computed accurately, it is known that 457 dead rats were picked up.

Termination of rats in public sewers

This work is carried out by a special staff of the City Surveyor's Department which undertakes a baiting routine of the sewers.

Particulars of the work done during 1956 are tabulated below.

Treatments	Number of manholes test baited	Number of manholes baited	Number of manholes showing bait taken
Initial treatment—			
2 maintenance	—	651	145
Test bait	1,893	—	170
1 maintenance treatment	—	5,021	874
2 maintenance treatment	—	1,811	378
Totals	1,893	8,483	1,567

Effectiveness of treatments

56,202 premises known to have been infested and treated, including some dealt with in 1955, were found to have been cleared of rodents. This total includes 3,963 premises cleared by Corporation treatments, the remainder having been dealt with satisfactorily by occupiers or operating companies.

Tracing of rat burrows in relation to drainage infestation

Conditions found and action taken as a result of examinations	By City Surveyor	By owners and occupiers	By Sanitary Services Division	Total
Number of examinations made	157	63	36	256
Sewers reconstructed	2	—	—	2
Minor defects in sewers repaired	65	—	—	65
Disused privy-midden drains removed	27	—	—	27
Other disused drains or sewers removed or otherwise dealt with	37	15	21	73
Defective drains remedied	—	44	3	47
Defective drains and sewers repaired by Corporation at owner's expense	—	—	13	13
Street drain inlets repaired	5	—	—	5
Outward burrows consolidated	6	4	—	10
Surface burrows consolidated	28	9	—	37
Undermining found to be due to causes other than rats	15	—	—	15
Totals	185	72	37	294

The possibility of house mice forming a reservoir of the virus of lymphocytic choriomeningitis and thus being responsible for human cases of the disease has previously been recognised both in this City and elsewhere.

In an investigation undertaken in 1951, the range of the property survey for the presence and collection of mice was rather limited in its scope, and a more comprehensive survey of three areas of similar properties has been continued and remains in progress. In two of the three areas, cases of lymphocytic choriomeningitis are known to have occurred. No case is known to have occurred in the third area.

Specimens of mice are being collected and submitted to the Public Health Laboratory Service for examination and the findings will be the subject of a report on the completion of the investigation.

Eradication of insect pests

Whilst a wide range of insects including cockroaches, bed-bugs, fleas, mosquitoes, non-biting midges, moths, carpet beetles, flour or cereal beetle, wood-boring beetles and ptinidae (spider beetles) are encountered by inspectors, the cockroach, bed-bug and flea continue to be those on which advice is most commonly sought by occupiers of premises.

Mosquito infestation recurred in the vicinity of a length of canal which has not been navigable for many years and has to receive special attention from the British Transport Waterways each year on representations from the Department.

In the course of inspections of houses for inclusion in clearance area No. 764 or 49 per cent. were found to be infested with bed-bugs which, although higher than the average of 40 per cent. recorded in the previous year, remained below the 70 per cent. of the pre-1939 experience. The tenants of 103 private owned houses were advised on the eradication of similar infestations. Corporation dwellings were found by the Housing Department to be infested with bed-bugs and that Department also found it necessary to disinfect furniture and effects of 955 families on allocation to Corporation houses.

In clearance area practice, the impossibility of rehousing families from complete blocks at one time coupled with extreme dilapidation making thorough sealing of houses impracticable, has continued to preclude the safe use of hydrogen cyanide fumigation prior to demolition. An alternative technique entailing some preliminary classification of infestation of timbers followed by either spraying with D.D.T. solution or destruction has been adopted and in practice results in rejected timber being burned on the site.

Two flour mills infested with flour beetles were fumigated with hydrogen cyanide by specialist contractors and two private dwellings were similarly treated for the eradication of bed-bugs.

Drainage works (defects and repairs)

Examination of drains

In the investigation of complaints of choked or defective drains where it is impracticable from a superficial inspection to ascertain the actual condition or course of the drainage systems the Corporation may, in accordance with the provisions of Section 48 of the Public Health Act, 1936, open the ground on private premises to examine the condition of drains etc., and if necessary, to carry out specified tests. This action was necessary at 183 premises and defective conditions were found in 123 cases necessitating service of statutory notices on the owners concerned.

Choked drains and sewers

Section 41 of the Manchester Corporation Act, 1950, empowers the Medical Officer of Health or Public Health Inspector to serve a notice requiring necessary work, within 48 hours, to release any choked drains, private sewers, water-closets and other sanitary appliances. Where immediate action is necessary, stoppages in lengths of public sewers can be dealt with forthwith under Section 2 of the Public Health Act, 1936, as extended by Section 33 of the local Act 1946.

Notices served to remedy stopped up drains etc., were complied with by the owners at 344 premises whilst at 91 premises the necessary work was carried out by the Drainage etc., Works Branch either in default or as a result of the owners concerned requesting the Department to undertake the work on their behalf. This Branch of the Department also carried out repairs to public sewers concerned with 426 premises. The expenditure so incurred is recoverable by the Corporation from the owners.

Sanitary Accommodation

There are 328 premises in the city at which the sanitary accommodation consists of pail-closets or privies. 210 are in Wythenshawe, 199 being at dwelling-houses, of which 134 are remote from sewers, and of the 65 where sewers are available, some only recently, the majority are old cottage or farmhouse property, the demolition of which is contemplated during the development of the area. It is intended that the remainder shall be converted to water-closets, and the Department is in communication with the owners for that purpose.

Of the remaining 118 premises elsewhere in the city, 90 are dwelling-houses, mainly without accessible sewers or are unfit and intended to be demolished under Clearance Schemes.

During the year, in Wythenshawe, 3 houses with pail-closets were demolished and in 6, conversions to water-closets were carried out. In the remainder of the city the pail-closet at 1 business premises was converted to a water-closet and 5 houses with pail-closets were demolished.

Voluntary alterations were carried out under the supervision of the district health inspectors in connection with the sanitary accommodation at 45 premises in accordance with plans submitted by the contractors.

Disposal of refuse

36 privately owned sites are used for the tipping of trade refuse and with the exception of where colliery wastes are being tipped no formal action has been required by the Department.

Colliery wastes, by reason of their combustible content present a serious risk of fire mainly through spontaneous ignition and in two instances action was necessary to secure attention to nuisance from fumes. Irrespective of measures to deal with smoke and fumes, however, the prevention of the combustion causing those emissions is a problem warranting review of disposal techniques.

The Clean Air Act, 1956, Section 18, which became operative on the 31st December, imposes an obligation on the owners of the mine from which the waste is drawn "to employ all practicable means for preventing combustion of refuse deposited from the mine . . . and for preventing or minimising the emission of smoke and fumes . . ." In practice it is recognised that an essential need is the exclusion of air and dissipation of heat and whilst a combination of different methods may be required to satisfy that need, continuous fine water spraying has been shown to be most commonly effective in controlling the nuisance.

In the disposal of domestic refuse the 7 sites used by the Cleansing Department are entirely different from those referred to above and the care taken by that Department in the use of the prescribed technique of "controlled tipping" results in effective, inoffensive disposal and beneficial utilisation of land.

The Director of Public Cleansing has reported to the Department on the amount and method of disposal of refuse by his Department; 172,623 tons were dealt with by controlled tipping; 28,530 tons by separation; 6,288 tons by incineration and 11,796 tons by utilisation, i.e., salvaged materials, clinkers etc.

Offensive trades

The following trades prescribed as "offensive trades" under the provisions of the Public Health Act, 1936, and the Manchester Order of 1921 were carried on at 57 registered premises within the City; the manufacture of manure and fertilizers from animal matter etc., (1); blood boiler (1); bone boilers and extractors (2); fat melters (2); fish curers (2); fish curer and pickle manufacturer (1); gut scraper (1); oil distiller (1); pickle and sauce manufacturers (2); rag and bone dealers (21); rubber spreaders (7); rubber substitute spreaders (3); soap maker (1); soap boilers (2); tallow melters (2); tanners (3); and tripe dressers and boilers (5).

It was not found necessary to take any formal action in respect of the manner in which these trades were carried on.

Effluvium nuisances

The pollution of the atmosphere in the Miles Platting area from chemical works has been the subject of a conference between members and officers of the City Council and the Chief Alkali etc. Works Inspector of the Ministry of Housing and Local Government, together with the Ministry's Inspector for the North-Western area.

Full discussion took place on the nature and sources of various pollutants with especial regard to hydrogen sulphide. In this latter respect measures being adopted to prevent such emissions were dealt with. It was agreed that improvement had been secured without complete cessation of emissions from the Alkali, etc. Inspectors emphasised that the risk of transient emissions was unavoidable and no guarantee of complete immunity could be given. It was also emphasised, however, that the after-treatment plant which had been specially installed to eliminate hydrogen sulphide in waste gases from a carbide-bisulphide plant at a previously offending works should be completely effective.

Nuisance arose in another district from diesel fumes pervading the atmosphere in a house adjacent to land used for the storage of buses prior to export overseas. Notice served upon the owner-occupier of the land secured abatement of the nuisance.

noise nuisance

Complaints were received on noise from 32 different industrial, trade or domestic sources. Garages, motor vehicles, engineering works, sewing machines, launderettes and a dairy were involved. Most were concerned with noises at particular times, late at night or early in the morning rather than with the level or intensity of the sound and to intermittent, more than continuous, noise. In related instances the complaints were found to be concerned more with disputes between neighbours than genuine nuisance.

In general, the investigation of the varying circumstances involved numerous visits and observations by the district inspectors during the night and at other regular hours to determine whether the noise did constitute a statutory nuisance and whether or not the best practicable means were being taken to prevent or mitigate it.

With one exception, where formal action was necessary, the co-operation of managements or individuals concerned speedily removed the cause for complaint.

The case involving formal action concerned noise from the late night loading and discharge of stone delivery into and from hoppers to lorries. It became necessary to serve statutory notice in accordance with the Manchester Corporation Act, 1946, Section 40, and this resulted in measures being adopted which abated the nuisance.

land used by pleasure fairs

In April protracted discussions which have been taking place between representatives of the Corporation and the Showmen's Guild on the use of sites by pleasure fairs, culminated in an undertaking from the Guild that its members would not set up fairs on other than an "agreed list" of sites. These are situated in some public parks and also on private land.

During the year and before this agreement, only one fair was reported to have been established on a non-recognised private site. Pleasure fairs were also held on 7 occasions in 5 different parks and on 2 occasions on land owned by the Estates Management Committee, on prescribed terms and conditions.

Only one complaint was received by the Department. This was concerned with an excessive volume of amplified music which, however, was promptly corrected by the proprietor on the request of the district public health inspector. Subsequent observations found that the volume remained properly controlled and there was no further complaint.

Rag flock and other filling materials

There are 99 premises registered under the provisions of the Rag Flock and Other Filling Materials Act, 1951, as being premises where designated filling materials are used in the manufacture of bedding (57); upholstery (34); cushions (1); soft toys (4); and baby carriages (1). 4 premises are also licensed for the storage of rag flock, for distribution to registered premises.

There are no manufacturers of rag flock in the City.

59 visits were made to premises and 26 samples of designated filling materials taken and submitted to prescribed analysts for examination in accordance with the Regulations and were found to conform to the prescribed form of cleanliness.

Export of washed rags and second hand clothing

Importing countries generally require exporters of rags and similar articles to supply certificates of cleanliness of such materials as a condition of entry into the country. Accordingly, dependent on the particular materials involved it is customary for one of the following treatments to be applied either by or under the supervision of the Department:—

- (a) washing and sterilizing by boiling in soda solution, or
- (b) high pressure steam disinfection, or
- (c) formalin disinfection.

Inspections were made and certificates issued in respect of the following:—

Articles	Quantity	Importing country
Washed rags and cotton waste	5 tons 12½ tons 19 tons 5 tons	Cyprus Eire South Africa New Zealand { Czechoslovakia Kenya Latvia
Second-hand clothing	2,400 articles 275 pairs shoes	{ Lithuania Rhodesia South Africa Tanganyika

40 tons of waste gelatine destined for Japan were certified as being from an area which was free from animal epidemics and not dangerous for importation.

Swimming baths

The results of tests of the cleanliness of the water in the 14 Corporation Baths were again highly satisfactory and also generally for the 7 privately owned swimming baths including one outdoor pool ; 2 of the private baths, however required special attention to secure maintenance of the Department's recommended standards.

During each visit to all baths samples of the water were taken for bacteriological examination by the Public Health Laboratory Service and bath-side tests were made to ensure that the required pH value of the water remained at approximately 7·8 and did not fall below 7·0. Experience clearly demonstrates the importance of the control of the pH value within that range in order to make filtration effective. Similarly, the adequacy of chlorination of the water was checked on each visit by testing for the amount of available or excess chlorine in the water at the outlet end of the bath. In accordance with the Department's practice samples were collected only when the pool were in use and mainly during periods of maximum bathing loads.

A considerable decrease in the numbers of bathers generally was noticeable at all baths and attributable mainly to the inclement weather which commonly prevailed.

Swimming baths equipped with efficient filtration and chlorination safeguards, do not spread poliomyelitis, but it appears to be necessary to reassure the public of this fact each year in which the disease is prevalent. At the same time it is essential during a period of high incidence of the disease that all the necessary steps are taken to ensure the continued purity of the water. It is also important to pay particular attention to the prevention of overcrowding at the baths and to the special cleansing of changing accommodation, showers, foot-troughs, side-walks and sanitary conveniences.

Establishments for massage or special treatment

Part IX of the Manchester Corporation Act, 1924, and byelaws made thereunder, deal with the licensing and conduct of establishments for massage or special treatment other than those provided through the National Health Service.

In exercising these licensing provisions, regard is had to the nature and extent of the experience or the qualifications possessed by applicants, and in respect of qualifications those prescribed in the National Health Service (Medical Auxiliaries) Regulations, 1954, continue to be an authoritative criterion. Present 59 establishments are licensed for chiropody, 12 for physiotherapy and 18 for chiropody and 18 for physiotherapy.

Hairdressers or barbers

596 hairdressers, barbers and their trade premises are registered under the provisions of Section 42 of the Manchester Corporation Act, 1946.

Byelaws obtained under the Act, are designed to secure the cleanliness of hairdressers' and barbers' premises, instruments and equipment and provide that every operative shall keep his hands, his clothing and any overall in a clean condition.

Whilst it was not necessary to institute proceedings for any offences under the byelaws 4 hairdressers were cautioned in respect of failure to comply with requirements. These were found to be satisfied on subsequent visits being made.

The City Surveyor's Department continued to notify this Department of applications under Town Planning provisions involving this trade, the establishment of the trade or business of a hairdresser or barber.

Sale of certain poisons

The Pharmacy and Poisons Act, 1933, and the Poisons Rules govern the sale of poisons by persons who are not registered pharmacists, and the Part II List defines those poisons which may be retailed by sellers listed by the local authority. These poisons include those contained in various disinfectants, household cleaning agents, insecticides and some hair dyes.

Certain poisons included in the first schedule of the Poisons Rules, (arsenical compounds, mercury chlorides and nicotine) may also be sold by listed sellers, but owing to their dangerous nature they are subject to special restrictions limiting the form in which they may be retailed. These poisons are mainly stocked by horticultural shops, may be sold only by the listed seller or his named deputies, and the sale must be recorded in the poisons book.

6 new listed sellers were recorded during the year, but the total fell to 1,077 as compared with 1,117 in 1955 and 1,166 in 1954. 116 listed persons discontinued the sale of poisons, one after renewing registration. Fees received totaled £288 7s. 0d. A decline in the number of listed sellers appears to arise from grocers and hardware dealers changing to the sale of household disinfectants which do not contain phenols or other listed poisons.

No contraventions in regard to labelling, packaging, recording or storage were reported.

Exhumations

During 1956, three licences were issued by the Home Office under Section 25 of the Burial Act, 1857, authorising the removal of human remains from burial grounds.

Public health inspectors attended the exhumations and reported that each was carried out in accordance with the conditions set out in the licence.

In each case exhumation was followed by re-interment in another grave in the same burial ground.

PUBLIC CONVENIENCES

Some further progress has been made in the extension of this service by the opening of new conveniences for both sexes at Woodhouse Park and Baguley Hall neighbourhood units in Wythenshawe, whilst at the end of the year two other dual conveniences were under construction in the Newall Green and Northern Moor districts.

In the City central area it had been intended to commence the enlargement and reconstruction of the Piccadilly conveniences, which were constructed in 1904, but the restrictions on capital works expenditure caused deferment of the scheme. The extensive nature of the work necessary to provide adequate accommodation is such as will entail closing of the conveniences whilst the alterations proceed and with the co-operation of the Parks Committee a temporary alternative convenience has been provided on a site abutting the Bus Station.

There are now 163 conveniences with accommodation as follows:—

Males—

With urinal, watercloset, washing and parcel storage accommodation	4
With urinal, watercloset and washing accommodation	5
With urinal and watercloset accommodation	11
With urinal accommodation	

Females—

With watercloset, washing and parcel storage accommodation	4
With watercloset and washing accommodation	4
With watercloset accommodation	

Although free hand-washing facilities are available at most conveniences the free service has been limited to the provision of a lavatory basin with cold water. In future, however, wherever deemed practicable, hot water, soap dispenser and drying facilities are to be provided.

At eight conveniences in the central area there is accommodation for the storage of parcels and during the year approximately 36,000 deposits were made.

Wilful damage at public conveniences without attendants continues at a level which adds appreciably to the operating costs and to the detriment of the high standard of service which the Department endeavours to maintain. Learning to appreciate and properly use this public property appears to be a slow process which may be expedited by the convictions of offenders when detected, three of whom were prosecuted and convicted during the year.

REPORT OF THE PUBLIC ANALYST

A. N. Leather, B.Sc., F.R.I.C.

The year's work has presented some abnormal features. The post of qualified assistant analyst remained vacant for the whole twelve months. A somewhat smaller number of samples has been submitted than in recent years, reflecting staff shortages in the Sanitary Services Division of the Health Department. In general the effect has been that the amount of routine sampling has been somewhat reduced, but that all special investigations, including those into complaints from the public, have been given full normal attention.

In these circumstances it is a special pleasure to thank all members of the laboratory staff for their effective support, and to thank for their willing co-operation all members of the Health Department staff whose work brings them into contact with the laboratory. Special thanks are due to Mr. F. Dixon, Deputy Public Analyst, upon whom an extra burden has fallen.

The new 1955 Food and Drugs Act was in force during the whole year under review. For the sake of continuity this Act contains provisions which keep in force former Regulations controlling the composition and labelling of food. The new Act provides wide powers for the making of new Regulations, and thus also, in effect, for modifying and modernising all controls which are exercised by means of Regulations. Up to the present, relatively few changes have in fact been made.

During the year important recommendations have been put forward by the Food Standards Committee (appointed to advise the Ministers of Food and Health). Standards of composition are proposed for Processed Cheese and Cheese Spread and for Sausages. The need for statutory control in these products has now been felt for several years and it has become urgently necessary that decisions should be made to prevent the *ad hoc* standards hitherto imposed by magistrates, and recognised locally, from falling into contempt. The Committee also made recommendations dealing with the addition of emulsifying and stabilising agents, and also of colouring matters, to food. (The latter recommendations actually appeared just before the end of 1955). The importance of these two types of additions has been emphasised by the discovery in recent years, after extended trials, that some substances hitherto thought to be harmless and by no means so innocent as they were supposed to be. The subject opens a new and difficult field of investigation for the food analyst as it becomes necessary to separate and identify very small amounts of dyes and chemical additives found in food.

The Flour (Composition) Regulations were made on the 31st July and came into operation on the 30th September. The standards themselves contained nothing novel or unexpected, but the responsibility for enforcing them was laid definitely upon Food and Drugs Authorities, whereas formerly it is understood that analytical control of the composition of flour was exercised by Ministry laboratories. The standards are concerned with vitamins and minerals. In this laboratory, following the issue of the Regulations, some work on the named mineral constituents of flour was undertaken, and extensive inquiries were instituted as to the most suitable equipment for the measurement of the named vitamins, vitamin B or aneurin and nicotinic acid or niacin.

Of all samples submitted and examined under the Food and Drugs Act and related Acts, the proportion of samples found to be "adulterated or otherwise giving rise to irregularity" was 6.0 per cent.

Analytical notes and some other comments are made upon unsatisfactory samples and upon a few samples recorded as genuine. Information about subsequent legal and administrative action has been provided by the Medical Officer of Health and by the Sanitary Services Division of the Health Department.

Food and Drugs Act, 1955

Summary of samples examined

Article	Number examined				Number adulterated or otherwise giving rise to irregularity			
	Formal	Informal	Private	Total	Formal	Informal	Private	Total
Milk*	422	699	—	1,121	73	58	—	131
Milk (sterilised)	87	28	—	115	—	1	—	1
Ice cream	7	5	—	12	—	—	—	—
Ice lollies	—	7	—	7	—	—	—	—
Alcoholic liquids:—								
Spirits	12	1	—	13	—	—	—	—
Wines	5	6	—	11	—	—	—	—
Wine cocktails	4	1	—	5	—	—	—	—
Others	15	19	—	34	—	—	—	—
Bacon and ham	4	—	—	4	—	—	—	—
Baking and golden raising powder	—	4	—	4	—	—	—	—
Barley	16	—	—	16	—	—	—	—
Biscuits	26	1	—	27	—	—	—	—
Blancmange powder	—	4	—	4	—	—	—	—
Bread	5	7	—	12	—	1	—	1
Bread, diabetic	2	—	—	2	—	—	—	—
Bread, fancy	1	5	—	6	—	—	—	—
Butter	23	—	—	23	—	—	—	—
Cakes, Eccles	—	4	—	4	—	1	—	1
Cakes (flour confectionery)	5	4	1	10	—	1	1	2
Cake and pudding mixtures	—	19	—	19	—	—	—	—
Canned:—								
Beans	—	4	—	4	—	—	—	—
Cereal products	—	9	—	9	—	—	—	—
Cream and imitation cream	—	17	—	17	—	—	—	—
Fish	—	9	—	9	—	—	—	—
Fruit and fruit juice	—	24	—	24	—	—	—	—
Meat and meat products	—	10	—	10	—	—	—	—
Soup	1	15	—	16	1	1	—	2
Sweet pudding	—	1	—	1	—	—	—	—
Vegetables and vegetable products	—	29	—	29	—	1	—	1
Celery salt	—	1	—	1	—	—	—	—
Cereals (prepared)	16	1	—	17	—	—	—	—
Cheese	8	—	—	8	—	—	—	—
Cheese, processed	—	4	—	4	—	—	—	—
Cheese spread	2	11	—	13	—	—	—	—
Chocolate spread	—	1	—	1	—	—	—	—
Christmas pudding	—	4	—	4	—	1	—	1
Cockles in vinegar	—	1	—	1	—	—	—	—
Cocoa	8	—	—	8	—	—	—	—
Cocoa, sweetened	4	1	—	5	—	—	—	—
Coconut, desiccated	14	—	—	14	—	—	—	—
Coffee	22	—	—	22	—	—	—	—
Coffee and chicory	—	3	—	3	—	—	—	—
Coffee and chicory essence	—	11	—	11	—	—	—	—
Coffee and chicory extract, dry	—	2	—	2	—	—	—	—
Coffee extract, dry	—	3	—	3	—	—	—	—
Colouring matter	—	1	—	1	—	—	—	—
Cornflour	12	6	—	18	—	—	—	—
Cream	—	1	—	1	—	—	—	—
Custard powder	19	3	—	22	—	—	—	—
Dried fruits:—								
Vine fruits	52	2	—	54	2	2	—	4
Others	11	5	—	16	—	—	—	—
Dried herbs	—	5	—	5	—	—	—	—
Dried pulses	59	2	—	61	—	—	—	—
Dripping	5	3	—	8	—	—	—	—
Fish cakes	—	2	—	2	—	—	—	—
Fish dressing	—	6	—	6	—	—	—	—
Fish paste	2	2	—	4	—	—	—	—
Flavouring	—	4	—	4	—	—	—	—
Flavoured spread	—	1	—	1	—	—	—	—
Flour, plain	8	8	—	16	1	2	—	3
Flour, self-raising	22	—	—	22	—	—	—	—
Food beverage powder	—	2	—	2	—	—	—	—
Fruit juice	—	1	—	1	—	—	—	—

Article	Number examined				Number adulterated or otherwise giving rise to irregularity				Percentage of samples unsatisfactory
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
—	—	2	—	2	—	—	—	—	—
syrup and treacle	—	12	—	12	—	—	—	—	—
rowning	—	12	—	12	—	—	—	—	—
powder and gravy salt	—	4	—	4	—	—	—	—	—
almonds	3	1	—	4	—	—	—	—	—
rice	8	—	—	8	—	—	—	—	—
—	—	7	—	7	—	—	—	—	—
—	—	1	—	1	—	—	—	—	—
stals	—	1	—	1	—	—	—	—	—
le	—	14	—	14	—	—	—	—	—
cooking fat	21	2	—	23	—	—	—	—	—
de crystals	1	—	—	1	—	—	—	—	—
flavoured barley crystals	—	1	—	1	—	—	—	—	—
juice	—	3	—	3	—	—	—	—	—
si, spaghetti and vermicelli	6	—	—	6	—	—	—	—	—
ne	23	1	—	24	—	—	—	—	—
n	—	1	—	1	—	—	—	—	—
ducts:—	—	—	—	—	—	—	—	—	—
puddings	13	—	—	13	—	—	—	—	—
Br	6	—	—	6	—	—	—	—	—
burgers"	—	1	—	1	—	—	—	—	—
dogs"	—	2	—	2	—	—	—	—	—
sausage	1	—	—	1	—	—	—	—	—
Me	2	1	—	3	—	—	—	—	—
pies	—	2	—	2	—	—	—	—	—
(tripe, etc.)	12	—	—	12	—	1	—	1	50
o	7	1	—	8	—	—	—	—	—
es	11	—	—	11	—	—	—	—	—
lk	—	2	—	2	—	—	—	—	—
lk	—	14	—	14	—	—	—	—	—
lk	—	9	—	9	—	—	—	—	—
ce	—	6	—	6	—	—	—	—	—
ved condiment	1	5	—	6	—	2	—	2	33
ed	—	1	—	1	—	—	—	—	—
oatmeal	9	—	—	9	—	—	—	—	—
utter	—	4	—	4	—	—	—	—	—
nd chutneys	9	23	1	33	—	1	1	2	6
et	102	4	—	106	4	—	—	4	4
de	—	6	—	6	—	1	—	1	17
e	30	—	—	30	—	—	—	—	—
ch	—	1	—	1	—	—	—	—	—
o	7	1	—	8	—	—	—	—	—
ad	—	8	—	8	—	—	—	—	—
ad	—	1	—	1	—	—	—	—	—
—	—	6	—	6	—	—	—	—	—
her than tomato)	—	20	—	20	—	—	—	—	—
mato	—	7	—	7	—	—	—	—	—
no	8	2	—	10	—	—	—	—	—
rim	—	2	—	2	—	—	—	—	—
t d	25	14	—	39	—	1	—	1	3
ck powder	—	6	—	6	—	—	—	—	—
ces	—	43	—	43	—	—	—	—	—
ffir	—	6	—	6	—	—	—	—	—
edded	15	—	—	15	—	—	—	—	—
—	47	2	—	49	—	—	—	—	—
ugar confectionery)	20	2	—	22	2	—	—	2	9
—	11	1	—	12	1	—	—	1	8
—	33	—	—	33	—	—	—	—	—
neg	26	—	—	26	1	—	—	1	4
total foods.	1,356	1,294	2	2,652	85	75	2	162	6.1

*Not including 8 "appeal to cow" samples of milk.

Article	Number examined				Number adulterated or otherwise giving rise to irregularity			
	Formal	Informal	Private	Total	Formal	Informal	Private	Total
Ammoniated tincture of quinine	1	—	—	1	1	—	—	1
Aspirin tablets	—	4	—	4	—	—	—	—
Bicarbonate of soda	—	6	—	6	—	—	—	—
Bismuth tablets	—	1	—	1	—	—	—	—
Blackcurrant juice	—	1	—	1	—	—	—	—
Blackcurrant syrup	—	1	—	1	—	—	—	—
Boric acid	—	1	—	1	—	—	—	—
Calamine lotion	—	2	—	2	—	—	—	—
Cascara sagrada tablets	—	1	—	1	—	—	—	—
Cough mixtures	—	7	—	7	—	—	—	—
Cream of tartar	—	1	—	1	—	—	—	—
Creosote	—	1	—	1	—	—	—	—
Digestive powders	—	3	—	3	—	—	—	—
Epsom salts	—	3	—	3	—	—	—	—
Glauber's salt	1	1	—	2	—	—	—	—
Glucose tablets	—	1	—	1	—	—	—	—
Glycerine	3	1	—	4	—	—	—	—
Glycerine of thymol	—	1	—	1	—	—	—	—
Glycerine, lemon and honey with ipocacuanha	—	1	—	1	—	—	—	—
Halibut liver oil capsules	—	1	—	1	—	—	—	—
Laxative tablets	—	1	—	1	—	—	—	—
Liquid paraffin	2	2	—	4	—	—	—	—
Malt extract with cod liver oil	—	2	—	2	—	—	—	—
Oil:—								
Camphorated	1	—	—	1	—	—	—	—
Castor	1	—	—	1	—	—	—	—
Neat's-foot	—	1	—	1	—	—	—	—
Olive	—	5	—	5	—	—	—	—
Raspberry vinegar	—	1	—	1	—	—	—	—
Saline, effervescent	—	2	—	2	—	—	—	—
Yeast tablets	—	2	—	2	—	—	—	—
Total drugs	9	54	—	63	1	—	—	1
Add total foods*	1,356	1,294	2	2,652	85	75	2	162
Total food and drugs*	1,365	1,348	2	2,715	86	75	2	163
All milk (including sterilized milk)*	509	727	—	1,236	73	59	—	132

* Not including 8 "appeal to cow" samples of milk.

Composition of milk

The average values for the percentage content of fat and non-fatty solids for the four quarters and for the whole year are set out in tabular form.

Quarterly average table

Quarter	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
First	302	8.67	3.43	12.10	266	8.73	3.50	12.23	36	8.25	2.88	11.13
Second	314	8.69	3.35	12.04	286	8.75	3.46	12.21	48	8.32	2.72	11.04
Third	308	8.73	3.52	12.25	275	8.76	3.59	12.35	33	8.50	2.86	11.36
Fourth	292	8.77	3.70	12.47	277	8.79	3.74	12.53	15	8.45	2.91	11.36

annual average table

Year	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
1956	1,236	8·71	3·50	12·21	1,104	8·76	3·57	12·33	132	8·36	2·82	11·18

Adulteration of milk

It is of course possible that milk might be adulterated in many different ways. Very occasionally, some unusual impurity or some original method of falsification may be encountered, but in practice when a milk is reported as "adulterated" it is because it fails to comply with the requirements of the Sale of Milk Regulations. These Regulations were made in 1939, and were kept in force by special provisions of the Food and Drugs Act, 1955.

Sale of Milk Regulations, 1939

1. Where a sample of milk (not being milk sold as separated, or condensed, milk) contains less than 3 per cent. of milk-fat, it shall be presumed for the purposes of the Food and Drugs Act, until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-fat, or the addition thereto of water.

2. Where a sample of milk (not being milk sold as separated, or condensed, milk) contains less than 8·5 per cent. of milk-solids other than milk-fat, it shall be presumed for the purposes of the Food and Drugs Act, until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-solids other than milk-fat, or the addition thereto of water.

It is very noteworthy that these Regulations are substantially the same as the Sale of Milk Regulations, 1901, and thus that the main requirements have not been altered in fifty-six years. But during those years the application of the Regulations has been altered in one or two very important ways, and perhaps it is time now to consider whether the Regulations themselves (or even section 1 of the Act, "Presumptive evidence of adulteration of milk") ought to be changed.

Until the contrary is proved

When these words were first written, they were supposed to lay upon the vendor the "burden of proof" of the contrary. Much has been written to the effect that this provision appears to infringe the legal axiom that a person is innocent until he is proved guilty. Considerations of this kind gave rise to the special sampling procedure for milk, a procedure now required by Section 94 of the Act and described in Part II of the Seventh Schedule.

In practice very often some evidence to the contrary is available before a question of legal proceedings arises. Very few purveyors of milk ever avail themselves of the right to serve notice requiring milk to be sampled in accordance with the Schedule.

Instead of waiting to be asked to take samples, sampling officers often, where necessary, by arrangement between different Food and Drugs Authorities follow back supplies of milk and finally may procure "appeal to cow" samples. In all this work the principal evidence to the contrary (in respect of added water) is yielded by the freezing point test.

Samples adjudged by the freezing-point test to be free from added water

The following samples of milk showed figures for non-fatty solids below the presumptive limit of 8.5 per cent. non-fatty solids fixed by the Sale of Milk Regulations, 1939, but were adjudged genuine (apart from any deficiency in fat) on the Hortvet freezing-point tests:—

Serial number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
545B	11.96	3.60	8.36	—0.542	17
548B	10.94	2.70	8.24	—0.542	15
555B	11.06	2.65	8.41	—0.547	18
575B	11.29	3.00	8.29	—0.552	15
613B	11.43	3.40	8.03	—0.545	15
614B	11.00	3.10	7.90	—0.537	16
615B	11.57	3.20	8.37	—0.545	14
643B	11.24	2.80	8.44	—0.531	17
58A	11.20	2.95	8.25	—0.546	18
81A	11.34	3.10	8.24	—0.529	16
679B	10.99	2.65	8.34	—0.547	17
681B	10.98	2.70	8.28	—0.544	17
685B	10.89	2.70	8.19	—0.534	17
156A	11.60	3.30	8.30	—0.551	18
158A	11.45	3.20	8.25	—0.544	17
720B	11.34	2.85	8.49	—0.541	17
721B	11.10	2.80	8.30	—0.540	17
722B	11.44	3.05	8.39	—0.541	17
762B	10.77	2.35	8.42	—0.544	18
764B	11.14	3.05	8.09	—0.533	15
224A	11.77	3.55	8.22	—0.545	16
788B	11.91	3.60	8.31	—0.537	17
791B	11.07	2.80	8.27	—0.541	16
792B	11.09	2.85	8.24	—0.532	16
256A	11.04	2.75	8.29	—0.541	15
811B	11.52	3.10	8.42	—0.538	17
841B	11.38	3.50	7.88	—0.539	14
842B	10.51	2.40	8.11	—0.547	14
843B	11.05	2.80	8.25	—0.558	14
847B	11.26	2.90	8.36	—0.544	15
849B	11.30	2.85	8.45	—0.543	15
306A	10.72	2.50	8.22	—0.550	17
870B	11.47	3.30	8.17	—0.549	16
871B	11.27	2.90	8.37	—0.551	16
872B	10.75	2.60	8.15	—0.550	18
873B	10.51	2.25	8.26	—0.544	17
874B	11.26	3.05	8.21	—0.548	17
876B	11.06	2.95	8.11	—0.549	14
877B	10.56	2.50	8.06	—0.549	15
878B	10.98	2.70	8.28	—0.543	15
879B	11.02	2.80	8.22	—0.541	15
901B	11.45	3.00	8.45	—0.541	15
904B	10.76	2.60	8.16	—0.539	15
905B	12.06	3.75	8.31	—0.547	16
918B	12.90	4.50	8.40	—0.532	16
919B	11.99	3.65	8.34	—0.540	16
921B	11.45	3.05	8.40	—0.536	16
922B	10.93	2.60	8.33	—0.543	17
923B	11.85	3.50	8.35	—0.538	17
924B	11.60	3.25	8.35	—0.543	16
383A	11.39	3.15	8.24	—0.560	16
952B	11.33	3.05	8.28	—0.538	17
953B	10.88	2.60	8.28	—0.537	17
504A	12.07	3.65	8.42	—0.554	23
505A	12.22	3.80	8.42	—0.543	17
506A	11.57	3.40	8.17	—0.544	18
511A	11.14	2.75	8.39	—0.545	16
512A	11.29	2.80	8.49	—0.543	18
1094B	12.43	4.10	8.33	—0.538	17
1095B	10.76	2.50	8.26	—0.534	16
1114B	11.63	3.30	8.33	—0.554	17
1115B	11.18	2.75	8.43	—0.546	17
1116B	10.87	2.85	8.02	—0.549	17
1211B	11.38	2.90	8.48	—0.546	14
649A	10.95	2.75	8.20	—0.542	17
652A	12.03	3.60	8.43	—0.544	16
1269B	11.55	3.20	8.35	—0.544	17
1270B	11.02	2.95	8.07	—0.542	17
699A	12.00	3.60	8.40	—0.549	16
701A	11.69	3.30	8.39	—0.546	15
1328B	11.26	2.95	8.31	—0.550	16
763A	12.06	3.75	8.31	—0.531	16
785A	12.03	3.65	8.38	—0.542	17
788A	11.30	2.85	8.45	—0.544	17
1343B	10.62	2.50	8.12	—0.537	15
1346B	11.64	3.20	8.44	—0.540	15

Serial number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
1368a	12.44	4.00	8.44	—0.559	22
1370b	11.48	3.00	8.48	—0.554	20
1417b	12.32	3.90	8.42	—0.548	16
1418b	11.25	2.80	8.45	—0.544	15
1419b	11.17	2.85	8.32	—0.541	15
1420b	11.23	3.00	8.23	—0.548	16
1421b	10.99	2.80	8.19	—0.544	16
925a	11.11	2.85	8.26	—0.545	17
927a	11.17	2.70	8.47	—0.552	18
928a	10.58	2.25	8.33	—0.545	17
931a	11.77	3.40	8.37	—0.552	19
932a	11.89	3.45	8.44	—0.555	21
960a	11.62	3.20	8.42	—0.552	18
1512b	11.26	3.15	8.11	—0.544	16
1514b	11.50	3.50	8.00	—0.547	16
1557b	11.20	2.75	8.45	—0.533	19
1562b	11.71	3.40	8.31	—0.545	17
1566b	11.84	3.65	8.19	—0.558	15
1595b	11.24	2.80	8.44	—0.546	16
1032a	11.18	2.95	8.23	—0.540	18
1641b	11.17	3.05	8.12	—0.544	17
1063a	11.38	3.25	8.13	—0.547	17
1670b	12.18	3.80	8.38	—0.533	18
1671b	11.98	3.70	8.28	—0.536	18
1683b	11.41	3.35	8.06	—0.543	18
1684b	11.62	3.35	8.27	—0.542	18
1685b	11.42	3.30	8.12	—0.541	18
1686b	11.63	3.40	8.23	—0.542	15
1687b	11.50	3.45	8.05	—0.541	18
Appeal to cow samples:					
898b	11.72	3.33	8.39	—0.543	16

Unless, some twenty-five years ago, the freezing-point test had been generally adopted and had been given recognition in the courts, all the milk represented by samples in the foregoing table could have been presumed to contain added water, and in legal proceedings the onus would have been upon the vendors to prove the contrary. By the use of the freezing-point test, vendors have been relieved of that burden.

Proportion of naturally sub-standard samples

If milk having less than 8.5 per cent. of non-fatty solids, but containing no added water, may be referred to as "naturally sub-standard" then of all samples of milk examined in this laboratory the proportion of naturally sub-standard milk samples in the last seven years has been as follows:—

Year ..	1950	1951	1952	1953	1954	1955	1956
Percentage	4.6	5.7	6.0	7.3	6.5	7.9	8.5

It is necessary to note that these figures are not based upon purely random sampling. Some of the naturally sub-standard samples were procured to investigate complaints that poor milk was being delivered in the City. But after making allowances for the methods of sampling, the figures appear to indicate that the proportion of naturally sub-standard milk is increasing. Without advocating any remedy in this report it may be mentioned that there are advocates, among dairymen and breeders of dairy cattle, of schemes for modifying milk-standards. Perhaps the most obvious schemes include:—

1. extra payment for higher fat and non-fatty solids according to an agreed scale,
2. an absolute standard for milk instead of the present presumptive standard,
3. naturally sub-standard milk (otherwise satisfactory) to be diverted for manufacturing purposes and not used for human consumption, or perhaps some combination of these three.

Added water

Of the 132 samples of milk reported to be "adulterated or otherwise giving rise to irregularity", 27 were found to contain added water in amounts varying from 1 per cent. (or less) to 10 per cent. One informal sample of sterilized milk was found to contain 73 per cent. of extraneous water, attributable to a defective crown cork which had permitted gross leakage during the heating process.

[Legal proceedings were instituted in respect of two samples of milk. Fines totalling £20 were imposed, and defendants were ordered to pay costs amounting to £2 15s. 0d. In respect of other unsatisfactory milk samples it was deemed appropriate to administer cautions.]

Deficiency in fat

As a Schedule to the 1939 Public Analyst's Regulations, in force throughout the year 1956, there is set out a prescribed form of certificate to be used by public analysts. In the notes appended to this form in the schedule the following sentence appears: "Where a sample of milk is found to be deficient both in milk fat and in other milk solids the analyst should indicate how much, if any, of the milk fat deficiency he considers to be due to abstraction, allowance being made for the effect of added water."

Suppose that a certain quantity of milk contains 3.0 per cent. of fat and 8.5 per cent. of non-fatty solids. (These percentages are always reckoned on weight in weight). Suppose further that 90 lb. of that milk is mixed with 10 lb. of water. Then the mixture has been made to contain 10 per cent. of added water and has the following composition:—

Non-fatty solids: nine-tenths of 8.5 per cent., i.e. 7.65 per cent.

Fat : nine-tenths of 3.0 per cent., i.e. 2.70 per cent.

Now approach the matter from the opposite point of view. Suppose that there is evidence from the analysis that a sample of milk contains added water, and that the proportion of added water in the sample is 10 per cent. Suppose further that such a sample contains only as much as 2.70 per cent. of fat. It is obvious that here the whole of the fall of the fat percentage below 3.0 per cent. is caused by the addition of water. Such a sample would not be recorded as "deficient in fat" but only as "containing added water". On the other hand, if the added water was assessed at 10 per cent. and the fat was found to be less than 2.70 per cent. then the sample would also be actually recorded as "deficient in fat". Of the 28 samples containing added water, as mentioned in the preceding paragraph, 7 samples showed a further deficiency in fat. The remaining 10 samples of milk recorded as "adulterated etc." had a fat content below 3.0 per cent. The percentage deficiencies varied from 1.6 per cent. to 25.0 per cent. (For example, where the fat percentage in a sample is 2.4, the proportion of the "missing" fat (namely 0.6) to the presumptive minimum limit (namely 3.0) may be expressed as a percentage deficiency of 20).

These 104 samples of fat-deficient milk were procured during the sampling of 59 consignments of milk in churns. Of the 59 consignments sampled, or six consignments showed an overall average of less than 3.0 per cent. fat. A deficiency in fat amounting to 25.0 per cent. occurred in two different samples, each belonging to a series of samples together representing a consignment of several churns. For one of those consignments the overall average fat percentage was found to be as low as 3.01, while the corresponding figure for the other consignment was only 2.82. Both the samples found to be 25.0 per cent. deficient in fat were also found to contain less than 8.5 per cent. of non-fatty solids.

ey, together with other samples from their respective consignments (each of e churns), were subjected to the freezing-point test and the respective results pear in the last foregoing table. (See No. 928A, together with 925A and 7A; and No. 873B, together with 870B, 871B, 872B and 874B, in "Samples judged by the freezing-point test to be free from added water".) A consign- ent of milk most or all of which is naturally poor in non-fatty solids is likely be also naturally poor in fat; though it is only fair to add that such a consign- ent may have a normal average for fat or even may be found to be rich in fat.

peal to cows

During the year under review, eight samples of milk were submitted, each representing the average composition of a complete milking of a herd of cows ked under the supervision of sampling officers. After analysis, seven of these ples were considered to be of normal composition. The eighth sample d a non-fatty solids content of only 8·39 per cent., but the freezing-point s normal for genuine milk; so that in this instance the whole product of one king of a herd was considered to be naturally poor in non-fatty solids. (his sample appears as No. 898B at the foot of the foregoing table, "Samples dged by the freezing-point test to be free from added water").

Adulteration of food (other than milk) and drugs

The table which follows immediately shows the classification of samples fnd to be adulterated or unsatisfactory, and also shows the kind of subsequent on taken.

Samples other than milk

Adulterated and other unsatisfactory samples and action taken

Normal and private samples					Article	Formal samples						
Formal samples obtained	Further samples pending	Cautioned	Stocks withdrawn	Notified to other local authority for investigation		Adulterated or unsatisfactory	Cautioned	Further samples pending	Legal proceedings			
									Summonses	Fined	Amount of fines	Amount of costs
										£ s. d.	£ s. d.	
—	—	1	—	—	Bread	—	—	—	—	—	—	
—	—	1	—	—	Eccles cakes .. .	—	—	—	—	—	—	
—	—	2	—	1 (p)	Cake (one p) .. .	—	—	—	—	—	—	
1	—	—	—	—	Canned soup .. .	1	1	—	—	—	—	
—	—	1	—	—	Canned vegetables .. .	—	—	—	—	—	—	
—	—	1	—	—	Christmas pudding .. .	—	—	—	—	—	—	
1	—	1	—	—	Dried fruit .. .	2	2	—	—	—	—	
—	2	—	—	—	Flour	1	—	1	—	—	—	
—	—	—	—	—	Meat products, meat pie .. .	—	—	—	1	1	10 0 0	
1	—	—	1	—	Non-brewed condiment .. .	—	—	—	—	—	1 3 0	
—	—	2	—	1 (p)	Pickles (one p) .. .	—	—	—	—	—	—	
—	—	—	—	—	Preserves, jam .. .	4	2	—	2	2	20 0 0	
—	—	1	—	—	Pudding, steamed .. .	—	—	—	—	—	2 15 0	
—	—	—	—	1	Soft drink, mineral water .. .	—	—	—	—	—	—	
—	—	—	—	—	Sweets	2	2	—	—	—	—	
—	—	—	—	—	Tapioca	1	1	—	—	—	—	
—	—	—	—	—	Vinegar	1	1	—	—	—	—	
—	—	—	—	—	Ammoniated tincture of quinine .. .	1	1	—	—	—	—	

Sample submitted as private sample at laboratory, with request that action should be taken by Health Department.

Private complaint made to Health Department. Sample submitted to laboratory as informal. Foreign body sent. Proceedings instituted by Corporation. Complainant asked to attend as witness.

Some notes on particular cases of adulteration or irregularity

In the following notes, each sample is introduced by the heading under which it was classified in the earlier table "Summary of samples examined" and the heading is immediately followed (where necessary) by the name of the article.

Bread—sliced brown bread (informal). This sample consisted of five slices and was submitted for the investigation of a purchaser's complaint that it contained foreign matter. Running through all the slices, and lying parallel to the top surface of the loaf and about half an inch from it, was a streak of pinkish red substance about half an inch wide. This was found to consist of a thin cardboard or thickish paper, and some pieces appeared to bear small parts of black printed characters (not legible). From the way in which the crust of the bread adhered to the foreign matter, the opinion was formed that the foreign matter must have been present in the dough before baking.

[The sampling officer investigating the complaint was advised to make a search for the source of any thin red card that might have fallen into the flour at the bakery. He was able to find, attached to a flour sack, a "tag" label resembling in colour and thickness the shreds found in the sample of bread. After being cautioned, the bakers undertook to take greater precautions to prevent the access of foreign matter to flour.]

Cakes—"Eccles cakes" (informal). When submitting this sample for analysis, the sampling officer stated that the product had been exposed for sale in a container the lid of which displayed the words "you can taste the butter" so as to be clearly visible to a purchaser. On analysis the proportion of total fat in the pastry was found to be 33 per cent., while the proportion of butter fat in the total fat was only 10 per cent. In such a product, sold in circumstances where there is an implied claim that butter is present, butter should constitute the major ingredient of the total fat present. The composition of the sample was therefore unsatisfactory when considered in relation to the claim "you can taste the butter".

[The bakers of this product stated that until recently they had sold two qualities of "Eccles" cakes differing in price. After they had discontinued the quality for which the claim "you can taste the butter" had been made, some of the old cartons had been wrongly used to pack the quality for which the words did not apply. They were cautioned, and undertook to blank out the inapplicable words on any further cartons used.]

Cakes (flour confectionery) (one informal and one private). A sample was submitted for the investigation of a complaint by a purchaser that it contained "foreign matter". The cake was made in horizontal layers. These were, starting from the top;—a coating of sugar icing, a half-inch layer of plain cake, a one-inch layer of a darker cake mixture or filling, and at the bottom another half-inch layer of plain cake. Embedded in the middle cake-mixture or filling, as revealed by a cut already made by the purchaser, was a rounded body about half an inch in diameter. The rounded body was friable and its substance had a strong green colour. Microscopically it was seen to consist of starchy material completely overgrown by moulds. Very numerous hyphae were present with typical sporing heads (penicillium type), and free spores were extremely numerous. Obviously some ingredient of the middle cake-mixture or filling had been mouldy. The sample was reported as unfit for consumption, and inspection of the process of manufacture and of the premises generally was recommended.

[The purchase had been made in the area of a neighbouring Food and Drugs Authority. The complaint was forwarded for any action the Manchester Authority might deem appropriate at the bakery. The bakery was visited and the whole process of manufacture followed through. The factory was found to be in a very satisfactory condition, and in particular no mouldy materials were to be found. The "filling" of the cake was made by pressing together small pieces of cakes of different colours, separately made. No adequate explanation was forthcoming. An appropriate caution was issued.]

Another cake called a "cream sandwich" had a central layer consisting of a white fatty filling together with some jam. This sample was submitted directly to the laboratory as a private sample. A complaint was made that a pellet of mouse excrement had been seen in the jam. On examination, a particle of mouse excrement was found and identified microscopically.

[The complainant desired that any further action should be taken by the Health Department. An investigation was made by a sampling officer and a rodent officer at the shop where the cake had been bought. No definite source of contamination was located, but precautions were tightened. Since the cake had been baked in the area of a neighbouring Authority, the Medical Officer of Health of that Authority was notified.]

Canned soup (informal and formal). An informal sample was submitted in the packers' original container, a ten-ounce tin. The label bore the words "Cream of Chicken Soup" and also the following declaration of ingredients:

"Milk, chicken broth, flour, arrowroot, butter, onions, sugar, salt, spices, fouring, chicken breast." Because of the relatively small fat content, the quantity of sample was not sufficient for a satisfactory determination of the butter fat. It appeared in any event likely that the ingredients had been declared in the wrong order. (To comply with the Labelling of Food Order, 1953, it is necessary to declare the ingredients "in the order of the proportion in which they were used, the ingredients used in the greatest proportion (by weight) being specified first"). Accordingly an increased quantity of the material was requested and this was submitted as a formal sample, the laboratory portion consisting of three cans having labels identical with that described above. The whole contents of the three cans were mixed together and weighed, then some slices of meat (taken to be chicken breast) were picked out, drained and weighed separately (= 2 per cent. of the whole contents). The fluid consisted of a pale thick soup having the following composition: Total solids 12.0 per cent.; mineral matter 1.3 per cent., including common salt 0.9 per cent.; reducing sugars after inversion 0.75 per cent., corresponding to sucrose 0.7 per cent.; fat 4.0 per cent. including butter-fat 0.6 per cent. Thus as little as 20 per cent. of milk would account for the whole of the butter-fat found. From the analysis it appeared that salt, sugar and butter (if any) should be declared in that order. Further, the opinion was expressed that the name of the soup "Cream of Chicken" together with the declaration of ingredients in which milk and butter were included (and in which no fat other than butter was mentioned) might be held to be misleading when applied to this product.

[A cautionary letter was sent to the manufacturers responsible for the label. At first they attempted to justify the wording, but finally agreed to make satisfactory amendments.]

Canned vegetables—peas (informal). A sample was submitted for the investigation of a complaint that foreign matter had been found by a purchaser among the contents of the can. The can had been opened and was only about a quart full when received for examination. Among the contents were found twelve foreign bodies, roughly equal in size, and a little smaller than the peas, which were themselves of small size. The foreign bodies were recognised as the following; two greyish stones, one piece of brick, one unchanged piece of coal, several black cinders resembling those resulting from the incomplete combustion of coal (one of these having unchanged coal on one surface), and one piece of clinker (partially fused coal ash). Nothing was found to indicate how or where these objects got into the peas. Three similar cans of the same brand were found to be in excellent condition and to contain no foreign bodies.

[The canners were informed of all the circumstances.]

Christmas pudding (informal). This sample was submitted in the manufacturers' original container, which was a rectangular carton bearing printed matter. The 1953 Labelling of Food Order requires that such a container shall bear a statement of ingredients, and also that "the said statement shall be clearly legible and shall appear conspicuously and in a prominent position on the label." The container of this sample did in fact bear a printed statement of ingredients, but the statement was printed in black upon a dark blue background and the height of the letters was less than one-sixteenth of an inch. The label was accordingly reported as unsatisfactory.

[The manufacturers admitted that legibility was poor. The Weights and Measures Inspector of another area had already pointed out that the required declaration of weight was not satisfactorily legible, and the manufacturers had obtained a dispensation from the Board of Trade to enable them to use up the present stock of cartons. On being cautioned they gave the assurance that clearly legible cartons would be used in the future. Later they sent a specimen carton for inspection, and it was considered to be satisfactory.]

Dried fruits—vine fruits (two informal and two formal). An informal sample named "Dried fruit mixture" was submitted in the packers' original container, a cardboard carton bearing printed matter including the following words: "Contents: Currants, sultanas, seedless raisins, sugared orange and lemon peel. The ingredients were separated by hand, and the following weights of dried fruits were found:—Sultanas 7.22 ounces; currants 2.57; raisins 2.12; candied peel 0.30. To comply with the 1953 Labelling of Food Order, it is necessary to declare the ingredients "in the order of the proportion in which they were used, the ingredients used in the greatest proportion (by weight) being specified first". Thus in the declaration of contents, "sultanas" should come before "currants". It was accordingly recommended that the packers should be advised to label their product in accordance with the Order, or (what would amount to the same thing) to pack a mixture conforming in composition with the printed declaration.

[An appropriate caution was issued.]

Another informal sample consisted of a carton of small sultanas of a pale yellow colour. These were found to contain sulphur dioxide in the proportion of 1,070 parts per million. The Public Health (Preservatives etc.) Food Regulations permit sulphur dioxide in sultanas in a proportion not exceeding 750 parts per million. A corresponding formal sample was accordingly requested and on examination was found to consist of small sultanas varying in colour from pale yellow to light brown. This sample was found to contain 490 parts of sulphur dioxide per million, well below the permitted maximum. No further action was therefore taken.

Two independent formal samples of sultanas from quite different sources, were both found to contain a few moth larvae together with a small amount of ebbing and excreta.

[Remaining stocks in the respective shops were surrendered, and appropriate cautions were communicated to the vendors.]

Flour, plain. During the year, the 1956 Flour (Composition) Regulations came into force, and had the effect of making certain detailed requirements as to the quantities of nutrients (vitamins and minerals) which must be present in flour, and also making Food and Drugs Authorities for the first time responsible for enforcing those requirements. Specialised equipment is necessary for the determination of the named vitamins, and while inquiries were being made as to the most appropriate methods and apparatus, a series of eight samples of flour was examined for minerals only, that is for iron and calcium. Calcium was added in the form of a pure powdered calcium carbonate known as "creta preparata" and the Regulations require the addition of not less than 235 milligrams and not more than 390 milligrams of creta preparata per 100 grams of flour. Three samples of flour were found to contain respectively 580, 110 and 70 milligrams of creta preparata per 100 grams. Further samples were requested from the same sources as these three unsatisfactory samples, and further investigations are intended during the ensuing year.

Meat products—meat pie (informal). A sample was submitted for examination following a private purchaser's complaint that it contained a "foreign body, apparently tobacco". When received, the pie was somewhat broken and appeared to have been bitten. Between the crust and the meat filling, at the bottom of one side of the pie, was a mass of brownish shreds which had caused staining on parts of the crust and filling. The shreds were microscopically recognised as tobacco leaf. A fragment of paper was found, resembling cigarette paper and burnt along one edge. The whole of the foreign material found could be accounted for by the presence of a disintegrated cigarette-end.

[Proceedings were instituted by the Corporation against the makers of the pie, who operated a large-scale bakery, and the complainant was asked to attend as a witness. A plea of guilty was entered. Defendants were fined £10 and ordered to pay witness's expenses of £1 3s. 0d.]

Non-brewed condiment (two informal samples). Two independent samples were found on examination to contain less than 4.0 per cent. of acetic acid. This opinion was expressed that "non-brewed condiment" is of the nature of a vinegar substitute, and that it should therefore contain not less than 4.0 per cent. of acetic acid. The respective deficiencies in acetic acid, expressed as a proportion of the minimum quantity of acetic acid that should be present, were 7.0 per cent. and 7.5 per cent. In both instances a request was made for corresponding formal samples. In one case no corresponding formal sample was procurable, in the other case a formal sample was procured and found to be of satisfactory strength.

Pickles and chutneys (mixed pickles, private; and pickled onions, informal). A private purchaser submitted a glass jar of mixed pickles. The clear liquid portion contained numerous very small insects and parts of insects, inconspicuous because of their transparency. These were identified microscopically as whiteflies (green flies). Further specimens of the same insect were found among the smallest branches of the pieces of cauliflower present, and might have been carried into the pickles upon the cauliflower. The pickles were not deemed to be actually unfit for food, but were not satisfactory. No further jars of similar pickles were then found to be on sale. An informal sample of another

product of the same maker was submitted as "pickled onions", and, as might have been expected, no similar insects were present in this sample. Incidentally this pickle bore a label with a statement of ingredients as follows: Onion caramel, salt, solution of acetic acid and malt vinegar. Analysis showed that the following would probably have been the correct order of ingredients: Onion solution of acetic acid, malt vinegar, salt, caramel. Accordingly the label on the latter sample was reported to be unsatisfactory.

[As regards the presence of insects in the mixed pickles, notification was sent to the Medical Officer of Health of the Authority in whose area the pickles were made. The packers were cautioned in respect of the label upon the pickled onions.]

Preserves (bilberry jam, formal). On analysis, a sample of bilberry jam was found to contain 210 parts of sulphur dioxide per million. When the Public Health (Preservatives etc. in Foods) Regulations were first made in 1925, the proportion of sulphur dioxide permitted in jams was limited to 40 parts per million. During the last war the limit was relaxed to 100 parts per million, powers being available for this purpose under the Defence Regulations. Since then the same less stringent limit has been incorporated into the Preservatives Regulations by amendment of the Schedule. The sulphur dioxide content of the sample was thus considerably higher than even the present less stringent maximum limit.

[Legal proceedings against the manufacturers led to a fine of £10 with £1 7s. 6d. costs.]

Preserves (apple and strawberry jam, formal). The Food Standards (Preservatives) Order requires the proportion of "soluble solids" in jams to be $68\frac{1}{2}$ per cent. By far the greater part of the soluble solids is contributed by the added sugar and only a small proportion comes from the fruit itself. Thus for practical purposes, deficiency in "soluble solids" means shortage of sugar. A sample of apple and strawberry jam was found to contain only 63.2 per cent. of soluble solids. The deficiency amounted to 7.7 per cent., when expressed as a proportion of the required percentage of soluble solids.

[Legal proceedings against the manufacturers led to a fine of £10 with £1 7s. 6d. costs.]

Preserves (apricot and pineapple jam, formal; and apple and damson jam, formal). These two samples were from entirely different sources. On examination they were both found to be somewhat deficient in soluble solids. By chance the deficiency was the same in both samples, and amounted to 2.1 per cent.

[In respect of one sample, a visit was made to the factory, and the manufacturers were cautioned. A cautionary letter was sent to the maker of the jam represented by the other sample.]

Pudding, sweet (steamed pudding, informal). This product was submitted in the manufacturers' original pack. The pudding, wrapped in a paper wrapper, was contained in a rectangular carton bearing printed matter. In addition to the description "Steamed Pudding" in large letters, there was also the prominent word "Currant" quite separate from other words. On another side of the carton were printed the words:— "Ingredients: Currants, sultanas, raisins, fat, sugar, syrup, flour and spice". For the purposes of the Labelling of Food Order, 1953, this product was taken to be "flour confectionery", and therefore exempted from all the labelling provisions of the Order. Accordingly the printed list of ingredients appeared to be a voluntary statement, and not required by the Order. Where the Order requires that a statement of ingredients

must appear, it is further required that "... the ingredients shall be specified in the order of the proportion in which they were used, the ingredient used in the greatest proportion (by weight) being specified first". The opinion was expressed that even a purely voluntary statement, if given at all, should comply with this requirement as to the order of ingredients, and if it does not, that it is capable of misleading a purchaser. On examination, the pudding was found to contain no raisins or sultanas, and analysis showed that in the list of ingredients, "flour" should appear next after "currants", and "sugar" should appear before "fat". For these reasons it was reported that the label was unsatisfactory.

[A cautionary letter was sent to the packers.]

Soft drinks (mineral water, informal). A sample of "lemonade" was contained in the manufacturers' original 26 oz. screw-stoppered bottle, and was submitted for the investigation of a complaint that the contents contained foreign matter. The sample was seen to contain a dark-coloured sediment, and microscopic examination showed it to consist of a dirty fibrous mass in which sand, vegetable fibres and mould mycelium were conspicuous. A thin film of similar matter adhered to one side of the bottle internally. The lemonade was reported unfit for consumption and the opinion was expressed that the contamination was attributable to faulty bottle-washing and inspection.

[The matter was reported to the Medical Officer of Health of the Authority in whose area the lemonade was bottled.]

Sweets (sugar confectionery) (two formal samples). In submitting a sample of sugar confectionery the sampling officer indicated the wording present on the manufacturers' printed display label. The wording included the following:—"Butter Mints. Caramel Centres. Containing real butter". On analysis the overall percentage of fat was found to be only 4.8 per cent., and the proportion of butter fat in the total fat did not exceed 55 per cent. The sample as a whole therefore contained less than 2.7 per cent. of butter fat, and the sample was considered unsatisfactory because it failed to conform with the Code of Practice L.F. 21/51, "Use of the word Butter in the Description of Confectionery". Under this Code of Practice it was agreed that where the word butter is used without qualification in the description of a sugar confectionery product, the butter-fat content of that product shall be not less than 4 per cent.

Another sample sold as "Devonshire Butters" consisted of individually-wrapped toffees. The waxed-paper wrappers bore printed matter giving the name and address of the manufacturer and also the following statement: "Ingredients Sugar, corn syrup, cow butter, deodorised palm oil, natural & artificial colours & flavours". Since sugar confectionery is wholly exempt from the labelling requirements of the Labelling of Food Order, any statement of ingredients can only be a voluntary declaration of composition, or a claim for the purpose of advertisement. On analysis the sweets were found to contain only 4.4 per cent. of fat and on further examination the fat itself was found to contain not more than 30 per cent. of butter-fat, while the remaining 70 per cent. resembled palm-kernel oil. There appeared therefore to be a breach of the above-mentioned Code of Practice. Clearly also "palm kernel oil" should precede "butter" in the voluntary statement of ingredients. The opinion was expressed that the use of the name "Devonshire Butter", taken together with the claim of "cow butter" before "palm kernel oil", might be held to be "misleading".

[Cautionary letters were sent to the respective manufacturers.]

Tapioca (formal). A sample consisted of small pale buff or nearly white pellets resembling "seed tapioca". On examination the sample was found to consist entirely of sago. Both sago and tapioca are starch products, and though for many purposes they are equivalent in use, they are entirely different in origin and should be correctly named.

[The vendor's attention was directed to the necessity of avoiding misdescription.]

Vinegar (formal). On analysis a sample offered as "pure malt vinegar" was found to contain:— Total solids 0.08 per cent.; mineral matter 0.02 per cent. and acetic acid 4.38 per cent. The sample had the characteristic aroma of malt vinegar, but was almost devoid of the solid constituents of malt vinegar. Further analytical tests showed that the sample actually consisted of distilled malt vinegar with a trace of added caramel. Though the product was of excellent quality and fully comparable in value to malt vinegar, the description on the bottler's label was not correct.

[The bottler's premises were visited, and the admission was made that the distilled malt vinegar had knowingly been described as pure malt vinegar. The bottler declared that he had used a more expensive article temporarily during a difficulty in obtaining his normal product, the motive being to retain the goodwill of customers by leaving the label unaltered. He was requested to use correct descriptions on his labels.]

Drugs

Ammoniated tincture of quinine "B.P." (formal). The 1948 edition of the British Pharmacopoeia omitted "ammoniated tincture of quinine", and from 1949 onwards an article of the same composition has been included in the British Pharmaceutical Codex. The sample complied with the formula, but should have been marked "B.P.C."

[The retailer was informed and requested to label the product correctly.]

Notes on some samples of food which, though not classified as "adulterated or otherwise giving rise to irregularity", raised some points of analytical or administrative interest.

"Hot Dogs" and "Hamburgers".

The Health Department made an investigation into the hygienic and compositional quality of "hot dogs" and "hamburgers" sold in the streets by mobile vendors, and the following samples were submitted:—

"Hot dogs." Two samples represented the products of two different trading concerns. Each sample consisted of five "hot dogs". Each "hot dog" consisted of an elongated roll of bread, almost cut in two lengthways, with a sausage inserted into the cut, so that the whole formed something like a sandwich. At the time of sale the sausage was warm. The following are the results of examination:—

	First sample	Second sample
Average weight of bread in one "hot dog"	1.0 oz.	1.2 oz.
Average weight of sausage in one "hot dog"	0.7 oz.	0.7 oz.
Average meat-content of sausage	71 per cent.	72 per cent.

Canned skinless sausages. Sampling officers visited the premises at which sausages were prepared for distribution to "hot dog" vendors. They found that the only sausages in use were of the canned skinless type. They procured a sample by opening a can. The spaces between the sausages in the can were filled with a weak solution of common salt, found in the laboratory to have a strength of 3 per cent. During the process of sterilization in the can, such sausages are necessarily already thoroughly cooked, and only need draining and firming before sale. Sausages from this sample were well drained, wiped with dry cotton cloth and allowed to "air" for about half an hour, then minced. On analysis the meat content was found to be 71 per cent.

Hamburgers. During their investigations, sampling officers found that uncooked "hamburgers" were obtained from a certain supplier and visited the supplier's premises. They procured a sample consisting of four flattish round sole-like masses, with savoury ("sage and onion" type) seasoning. These are said to consist of raw sausage-meat and bread crumbs, and had an average weight of 2.5 oz. Adequate cooking would be necessary before such products could be offered for sale for immediate consumption. On analysis this sample was found to have a meat-content of 59 per cent.

Meat-content in "hot dogs" and "hamburgers" was calculated as the sum of the percentage of lean meat, with its natural moisture, and the percentage of fat. For the purposes of the investigation, the meat-contents were regarded as satisfactory.

Samples submitted by the Health Department

(a) Investigation of suspected food-poisoning, etc. Chemical analysis (in addition to any bacteriological examination that might have been done at the Regional Public Health Laboratory) was carried out upon the following samples: Tea (fluid prepared for drinking) and all the separate ingredients used in making it, cocoa (a proprietary brand of prepared cocoa powder), canned salmon, drinking water for lead, milk for the presence of a "phenolic" taint. No significant amounts of any harmful substances were found.

(b) Examination of various materials. Foam plastic sheet was tested as a filter for impure air or "smog". A sterile-injection solution was examined for morphine (1 per cent. found). Foreign matter blocking the outlet of an electrically-heated milk vessel in a canteen was identified. Whisky and soda was examined for foreign matter (cork dust found). Two samples representing material from two adjacent colliery-waste tips were examined and an opinion expressed as to the possibility of the spread of fire from one tip to the other.

Samples submitted by other Corporation departments

(a) Parks and Cemeteries Department. The duties of the Manchester County Borough under the Fertilizers and Feeding Stuffs Act have been delegated by the City Council to the Parks and Cemeteries Committee. Nine samples of fertilizers were submitted. These were: two compound fertilizers, four superphosphates, and one each of bone meal, dried blood and hydrated lime. In the few cases where the results of analysis did not agree with the statutory statement, the composition of the fertilizer was rather better than stated. One sample of feeding-stuff represented a product offered for sale without any statutory statement, and was identified as fish-meal by analysis.

(b) Markets Department. A sample of "chocolate candy" was submitted for the investigation of a purchaser's complaint that it contained foreign matter. The sample consisted of a block of sweetmeat of which one corner had become detached. The detached portion obviously fitted into position upon the remainder of the block. The constituents of the sweetmeat were sugar and fat with

some cocoa or chocolate, and shreds of coconut were enclosed in the block. The detached portion of the sample was the subject of the complaint. It was impregnated with substances derived from the sweetmeat. When washed free from these substances by means of solvents, it was seen to consist of an irregularly shaped portion of a small animal. The portion comprised a transverse slice of the body with skin and hair. The hair was recognised as being the hair of a rodent, and in particular it strongly resembled hair belonging to the portion of an animal found in a second sample of the "candy". This second sample consisted of the whole remaining unsold stock in the box from which the first sample had been sold. The box contained eight elongated blocks of the sweetmeat. Visible on one of the cut faces of one of the blocks was an oval area having a different texture from the sweetmeat. By dissection and washing a foreign body was removed and seen to consist of the whole head and neck of a mouse. (Legal proceedings were instituted against the vendors for selling food unfit for human consumption, and fines amounting to £30 were imposed.)

A sample of grapes having a dusty appearance was examined for the presence of harmful spray residues. The dusty matter on the skins was shown to consist largely of uncombined sulphur. No arsenical contamination was detected.

(c) Weights and Measures Department. Three samples were shown to comply with the definition of "petroleum" for the purposes of the Petroleum Act. Two of these were identified as petrol (motor spirit), while a third sample, an industrial solvent described as "benzine", was identified as a light petroleum fraction.

(d) Transport Department. Two samples of hand-cleaning pastes and three of barrier creams were examined for general composition and for the presence of any irritant chemicals. A bar of pale hard soap was submitted for general analysis and for the presence of any substance likely to damage paint.

(e) Housing Department. A sample of ground water from a trial-hole on a proposed housing site was examined to find out whether it would be likely to damage cement.

Samples from other sources

(a) Port of Manchester Health Authority. Samples of imported foodstuffs were examined for the following purposes; for preservatives 12; for injurious metallic impurities 6; for prohibited colouring matters 3. In addition flour and rice were examined for specified contaminants, cheese spread for excess sodium phosphate and "bread improver" for general composition.

(b) Public bodies submitted the following samples: Surgical wire; five cakes of raw opium for analytical identification; two samples of laundry soap powder; one lard and three cooking fats.

(c) Private firms submitted the following samples for general information or in relation to statutory requirements: Rice for soundness; cooking fat for incipient rancidity; frozen whole eggs and liquid eggs with sugar; foreign material found in edible oil; two lemon curds.

(d) Private individuals submitted the following samples all of which were found to be of satisfactory composition: chocolate coated biscuits; lining paper from a can of crab meat; dispensed medicine.

Chemical examinations for H.M. Coroner

Evidence was given at an inquest following the examination of human organs and their contents. The quantity of alcohol found in the stomach was regarded as a contributory factor to the cause of death.

Drinking water and other water samples

The water samples examined during the year may be classified thus:—

Samples taken to investigate complaints	.. .. .	24
Checks on previous complaints	.. .. .	3
Miscellaneous: Drinking water	.. .. .	1
Other than drinking water	.. .. .	1
Total number of samples		29

When drinking water is submitted to this laboratory, for chemical analysis, the primary consideration in formulating a report is the "potability" of the water from the point of view of the health of the consumer. This point of view is shared by the Regional Public Health (bacteriological) Laboratory, and the two laboratories regularly exchange information of mutual interest.

Chemical analysis of drinking water is also performed by the Corporation Waterworks Laboratory, where the information obtained is of value in water-engineering and distribution, with the final aim of supplying a "potable" water.

There is one field in which the public analyst's laboratory and the waterworks laboratory are both directly concerned, and that is in the investigation of complaints. If a consumer feels that he has cause for complaint he may choose to lodge the complaint in the first instance with the Waterworks Department. He considers that there is risk to health, he may choose first to inform the Health Department. When the Health Department receives a complaint that the water has some fault directly referable to the supply, such as the presence of sediment, the Health Department informs the Waterworks Department at once, and then procures samples.

A number of complaints were referable to a single cause. In August a violent rainstorm caused flooding of streams in the Longdendale Valley. Brown flood-water carrying silt broke down the walls of channels intended to by-pass the waterworks, and thus entered the supply reservoirs. The result was a sudden darkening of the colour and increase in the cloudiness of water reaching certain areas supplied from these works. Numerous complaints reached both the Health and Waterworks departments.

Soon after the Longdendale rainstorm, examination of samples often gave results which were in accord with consumers' complaints that the water was "coloured" or "cloudy" or that it "contained a sediment". While cloudiness and sediment are admittedly undesirable, it cannot be said that these states of the drinking water in themselves are a danger to public health. But they do increase the difficulty of forming an opinion, based on analytical examination, that a water is fit for consumption. It was noted from the analysis that a suitable (very small) level of residual chlorine was generally maintained, to provide a safeguard against bacteriological contamination.

During the emergency, results were exchanged between this laboratory and the bacteriological and waterworks laboratories. In an emergency of such a kind, the onus of deciding whether the water can be judged to be free from health risks rests mainly on the bacteriological examination. Though it is not within the province of this report to enlarge on bacteriological findings, it may be permissible to mention that the somewhat increased chemical treatment of the water at the waterworks led to satisfactory bacteriological results.

A sample of ground-water from a trial hole at a proposed housing site was examined, and an opinion was expressed that it might affect Portland cement somewhat adversely.

Measurement of atmospheric pollution

As a "co-operating body", the Corporation has continued to provide laboratory facilities and staff for the measurement of atmospheric pollution in accordance with the standard methods of the Fuel Research Board of the Department of Scientific and Industrial Research.

The following equipment is maintained:—

8 deposit gauges, for the full analysis of deposited matter.

3 lead-peroxide cylinders, for the gravimetric determination of sulphur pollution.

1 volumetric apparatus for sulphur dioxide and smoke.

This work necessitated over 1,500 separate determinations or analyses during the year.

Results are communicated monthly to the Superintendent of Observation, Atmospheric Pollution Research; and appear together with those of other co-operating bodies in the monthly Atmospheric Pollution Bulletin. The increased public interest in "clean air" is reflected in the increased number of local authorities co-operating, and in the obviously increased thickness of the Bulletin during the last year or so.

Daily average figures for sulphur dioxide and smoke, calculated by monthly stages for the year and four preceding years, are given in the following Table.

Volumetric apparatus for sulphur dioxide and smoke
Rusholme

	Daily average sulphur dioxide— parts per 100 million					Daily average smoke— milligrams per cubic metre				
	1956	1955	1954	1953	1952	1956	1955	1954	1953	1952
January	18.3	14.0	18.3	21.1	16.9	0.354	0.330	0.422	0.488	0.3
February	20.6	13.3	15.9	15.3	20.3	0.516	0.225	0.327	0.326	0.4
March	9.7	14.7	11.5	19.7	11.1	0.242	0.313	0.242	0.447	0.2
April	11.6	9.9	10.5	8.9	10.3	0.277	0.193	0.221	0.180	0.2
May	7.0	6.6	7.8	6.3	7.4	0.180	0.133	0.222	0.130	0.2
June	6.5	4.8	4.9	6.8	6.7	0.190	0.090	0.151	0.159	0.1
July	4.9	5.5	5.4	2.9	6.0	0.148	0.118	0.180	0.075	0.1
August	6.2	4.4	5.7	4.6	5.2	0.226	0.129	0.225	0.123	0.1
September	6.3	6.9	5.4	6.2	9.2	0.219	0.175	0.195	0.185	0.1
October	12.1	12.5	6.6	13.4	10.6	0.333	0.279	0.192	0.389	0.1
November	16.4	23.4	12.9	8.8	18.2	0.373	0.543	0.349	0.241	0.1
December	11.7	14.1	9.8	13.9	18.3	0.305	0.299	0.251	0.363	0.1
Average daily figure over all year	11	11	10	11	12	0.28	0.23	0.25	0.26	0.1

In accordance with current practice in the Atmospheric Pollution Bulletin sulphur dioxide is expressed in the above table as "parts per 100 million" instead of as "parts per million". For comparison, results obtained in the laboratory in recent years have been expressed in the same way.

D.S.I.R. lead peroxide instrument

Sulphur pollution expressed as milligrams SO_3 per 100 square centimetres exposed surface per day. Results reduced to "Batch A" lead peroxide (louvered cover)

S_5 = mean results May/September.

W_5 = mean results November/March.

Y_{12} = yearly mean April/March.

Station	Summer— S_5	Winter— W_5	Year— Y_{12}
	1956	1956-57	1956-57
Monsall	2.3	4.9	3.6
Rusholme	1.3	2.5	2.0
Withington	0.8	1.8	1.3

The above table is set out in the form adopted by the D.S.I.R. for this instrument.

D.S.I.R. lead peroxide instrument

Sulphur pollution expressed as milligrams SO_3 per 100 square centimetres exposed surface per day. Results reduced to "Batch A" lead peroxide.

	Monsall		Rusholme		Withington	
	1956	1955	1956	1955	1956	1955
January	5.7	4.7	3.7	2.8	2.4	2.2
February	4.6	4.2	4.2	3.1	2.7	2.3
March	3.8	3.7	2.5	3.1	1.8	2.1
April	3.2	3.5	2.3	1.7	1.7	1.2
May	2.4	2.7	1.4	1.8	0.8	0.9
June	2.2	2.0	1.3	1.2	0.7	0.7
July	1.9	1.7	1.2	1.2	0.7	0.8
August	2.3	1.7	1.3	1.0	0.7	0.7
September	2.9	2.9	1.2	1.4	0.9	No record
October	3.8	3.7	2.2	2.4	1.5	1.4
November	4.5	5.8	3.2	3.5	2.0	2.7
December	5.2	4.9	2.6	2.8	1.9	1.8
Overall average	3.54	3.46	2.26	2.17	1.48	1.53

D.S.I.R. deposit gauge
Tons of deposit per square mile
Monthly averages

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solid	
	1956	1955	1956	1955	1956	1955	1956	1955
Baguley	2.8	2.0	5.10	4.42	6.05	4.91	11.15	9.33
Booth Hall	3.3	2.1	9.52	8.91	7.20	6.11	16.72	15.02
Heaton Park	3.3	2.3	6.15	5.84	6.09	5.08	12.24	10.92
Monsall.. .. .	3.0	1.9	11.22	9.91	8.64	6.53	19.86	16.44
Philips Park	3.2	1.9	27.70	24.88	10.97	8.00	38.67	32.88
Rusholme	3.1	2.0	13.14	12.49	8.85	7.85	21.99	20.34
Withington	2.7	1.9	9.27	12.03	6.81	5.67	16.08	17.70
Average for above gauges.. .. .	3.0	2.0	11.73	11.21	7.80	6.30	19.53	17.51
Knowle House* (Handforth)	2.6	2.0	4.22	3.34	4.60	3.95	8.82	6.29

* This station is situated in Cheshire, outside the City boundary, and is about eight miles south from the City centre. Results are recorded for comparison.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE

Honorary Secretary:—C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law

The Manchester and District Regional Smoke Abatement Committee is an advisory organization of local authorities in South Lancashire and North Lancashire which was formed originally at the suggestion of the Ministry of Health and was re-constituted in 1946. The number of member authorities is 79, covering an area of about 700 square miles and the Committee's assistance is available to member authorities for technical and other problems concerning forms of atmospheric pollution.

One meeting of the Executive Committee was held during the year and there was a meeting of the full Committee at which an address on the "Clean Air Bill" was given by Arnold Marsh Esq., O.B.E., M.SC.TECH., M.INST.F., Director of the National Smoke Abatement Society.

The extensive observations on atmospheric pollution undertaken by the Committee through two joint schemes of participating authorities have been continued. A meeting of the standing technical committee which was formed to review progress in the investigations was held in November, 1956. The Committee decided to widen the scope of investigations considerably and to install further additional deposit gauges and two lead peroxide apparatuses. Instructions were also given for the purchase and assembly of two sets of volumetric smoke/sulphur dioxide apparatus to be used in mobile form in areas where it is suspected that atmospheric pollution is increasing. After reviewing results obtained with deposit gauges and lead peroxide apparatus at two sites in Lymm U.D. and two sites in Bucklow R.D. it was decided to move the apparatus to fresh sites in these areas.

Observations on atmospheric sulphur dioxide by means of lead peroxide apparatus were commenced for the first time during 1956 at Lostock Library in the Borough of Stretford and Penfold Park and Peel Park in Worsley U.D.

At 31st December, 1956, the Regional Committee was maintaining observations in the areas of 36 local authorities by means of 80 lead peroxide apparatus and 12 deposit gauges.

New observations were being arranged for sites in the Borough of Rotton-stall and the Borough of Bacup. Results of observations are shown in tables accompanying this report.

The Committee's officers have received many requests for advice and assistance during the year in connection with special problems which have caused difficulties to local authorities, mainly concerning industrial processes giving rise to atmospheric pollution.

One problem of particular interest was a complaint of dust of industrial origin being blown into houses and deposited in various parts of a small town.

The dust was thought to have emanated from a works where chrome ore was processed. The Committee's officers surveyed the area and arranged for a large number of Petri dishes to be exposed in different directions and at varying distances from the works.

Samples of dust were obtained from window sills of houses in the district. Samples were taken from the raw materials dump and a waste heap near the factory and the whole of the samples together with the contents of the Petri dishes were submitted for analysis. Analysis revealed a close similarity between the residue from the waste tip, the scrapings from house windows and the deposits in the Petri dishes, leading to the conclusion that the dust concerning which complaints had been made was material blown from the waste tip at the works. Recommendations were made for baffle boards and other means to be taken to minimise the nuisance.

The Committee has continued to maintain close relationship in research and other matters with the Department of Scientific and Industrial Research, the Fuel Research Board and other government departments. It is also an Institution member of the National Smoke Abatement Society.

Investigation of atmospheric pollution—Carrington/Partington Area

ESTIMATION OF SULPHUR DIOXIDE expressed as mgms. SO_2 /day/100 cm^2 Batch A Pb (louvered cover)

SITE	MEANS											
	Summer					Winter				Year		
	1948-1952	1953	1954	1955	1956	1948-1953	1953-1954	1954-1955	1955-1956	1948-1953	1953-1954	1954-1955
Altrincham M.B.												
Wellington Rd. Secondary School	—	—	1.11	1.06	1.26	—	—	2.60	2.74	—	—	1.79
Oldfield Brow Primary School	—	—	1.17	1.08	1.35	—	—	2.62	2.67	—	—	1.85
Bowdon U.D.												
Towns Yard	—	—	0.65	0.56	0.66	—	—	1.76	1.66	—	—	1.05
Bucklow R.D.												
Ackers Farm	0.80	1.06	1.31	1.17	*	1.54	2.12	2.27	—	1.14	1.62	1.77
Moss Hall Farm . . .	1.03	1.31	1.27	1.47	1.73	1.75	2.45	2.40	2.99	1.34	1.87	1.83
Green Lane Farm . . .	0.68	0.82	0.74	0.71	1.05	1.40	1.91	1.84	2.09	0.99	1.36	1.27
Partington Gas Works	2.35	2.80	3.20	3.85	3.85	3.81	7.22	7.17	7.36	2.92	5.06	4.98
Bent Farm	0.63	0.58	0.64	0.64	0.76	1.25	1.50	1.66	1.71	0.89	1.02	1.11
Eccles M.B.												
Barton Airport	1.12	1.46	1.33	1.99	1.92	2.00	3.67	3.49	3.56	1.51	2.55	2.38
Sewage Works	—	—	1.78	2.37	2.36	—	4.80	4.30	4.22	—	—	2.97
Westwood Park . . .	—	—	1.30	1.24	1.48	—	3.67	3.13	3.33	—	—	2.17
Hale U.D.												
Sewage Works	—	—	0.83	0.78	0.95	—	1.78	1.89	1.83	—	—	1.31
Irlam U.D.												
Princess Park	1.00	1.38	1.33	1.35	1.36	2.06	3.16	2.77	2.68	1.49	2.27	2.74
Railway View Farm . .	0.81	0.99	1.06	1.23	1.28	1.74	2.70	1.79	2.70	1.23	1.86	2.43
Sewage Works	0.92	1.12	1.16	1.24	1.41	1.55	2.47	2.54	2.32	1.20	1.78	1.78
Woodside Farm	0.61	0.76	0.80	0.87	0.98	1.21	2.05	1.91	2.00	0.88	1.41	1.33
Sale M.B.												
Grammar School . . .	0.84	1.01	1.01	1.13	1.20	1.90	2.82	2.96	2.77	1.31	1.95	1.93
Highways Depot . . .	0.86	1.12	1.21	1.11	1.39	2.04	2.70	2.48	2.82	1.38	1.93	1.82
Sewage Works	0.90	1.04	1.25	1.14	1.59	1.95	2.89	3.07	2.99	1.28	1.93	2.07
Stretford M.B.												
Victoria Park	1.01	1.19	1.45	1.24	1.68	2.22	3.33	3.33	3.53	1.55	2.26	2.34
Metrovick Mosley Rd.	4.28	9.53	9.63	6.87	9.40	6.42	8.13	8.11	9.08	3.59	8.83	9.00
" West Works	3.14	7.65	7.45	5.41	5.09	4.32	6.41	6.66	5.65	3.59	6.78	6.97
Urmston U.D.												
Bowtell Road	0.99	1.14	1.18	1.29	1.59	1.93	2.89	2.90	2.89	1.41	2.06	1.99
Irlam Road	0.68	0.74	0.85	0.96	1.10	1.57	2.13	2.19	2.31	1.08	1.44	1.49
Davyhulme Sewage Works	1.30	1.87	1.74	2.10	2.28	2.57	4.21	4.01	4.13	1.90	3.06	2.84
Westbourne Park . . .	1.07	1.15	1.18	1.03	1.40	2.32	2.81	2.64	2.73	1.61	1.99	1.87
Barton Power Station . .	2.01	1.43	2.79	3.46	3.73	2.77	4.63	5.45	4.93	2.37	3.15	3.87
Means—all sites . . .	1.29	1.90	1.83	1.83	2.03	2.30	3.43	3.26	3.37	1.65	2.67	2.55

Investigation of atmospheric pollution—Joint Scheme No. 2

ESTIMATION OF SULPHUR DIOXIDE expressed as mgms. SO_2 /day/100 cm^3 Batch A PbO_2
(louvred cover)

SITE	MEAN RESULTS													
	Summer					Winter					Year			
	1952	1953	1954	1955	1956	1951- 1952	1952- 1953	1953- 1954	1954- 1955	1955- 1956	1952- 1953	1953- 1954	1954- 1955	1955- 1956
Don-under-Lyne M.B. Ambulance Depot, Lord Street Asmere	— —	— —	2.32 1.62	1.88 1.46	2.01 1.53 (c)	— —	— —	— —	4.35 2.66	4.83 2.62	— —	— —	3.30 2.12	2.52 2.04
Walshead Pike Wille Dingle Winchurst Sewage Works	— — —	— — 1.66	1.75 1.56 1.67	1.87 1.54 1.61	1.81 1.52 1.59	— — —	— — —	— — 3.55	2.84 3.06 3.18	3.25 3.20 3.32	— — —	— — 2.60	2.33 2.31 2.41	2.56 2.37 2.46
Donshaw U.D. Croft Hall Clifton U.D. Birch Lane Marmar School	1.00 — 0.82 1.25	1.48 — 1.22 2.25	1.63 — 1.24 2.55	1.51 — 1.27 2.32	1.53 — 1.25 2.43 (c)	2.31 — 2.08 3.14	2.14 — 2.81 2.81	2.81 — 2.83 4.94	2.79 — 2.63 4.58	2.89 — 2.57 4.46	1.44 — 1.41 1.83	2.12 — 2.02 3.70	2.19 — 1.92 3.53	2.20 — 1.92 3.39
Clifton U.D. Walt Bank Wine Farm	0.79 1.18	1.06 1.92	0.97 *1.66	1.15 1.97	1.14 *	2.08 2.42	2.07 2.22	2.63 3.38	2.27 2.92	2.32 3.04	1.40 1.60	1.84 2.63	1.64 2.47	1.73 2.50
Don U.D. Don Hall Sage Works Sage Works	1.05 0.77	1.33 0.97	1.34 0.97	1.43 1.03	1.48 1.04	2.23 1.76	2.19 1.62	2.58 2.00	2.63 1.76	2.80 1.95	1.52 1.13	1.96 1.47	1.99 1.37	2.11 1.49
Don U.D. Methery	1.28	1.67	1.91	1.81	1.82	2.84	2.58	3.66	3.25	3.84	1.80	2.65	2.60	2.83
Donfield M.B. Donfield Park	1.06	1.24	1.28	1.49	1.33	2.42	2.29	3.09	2.75	2.63	1.59	2.13	2.00	2.06
Faith U.D. Sage Works Sage Works	1.18	2.09	2.24	1.88	1.90	2.64	2.60	3.57	3.10	3.24	1.74	2.90	2.69	2.56
Faith M.B. Sage Works Sage Works	— —	1.54 1.94	1.61 2.12	1.79 2.40	1.70 2.55	— —	— —	3.77 4.56	3.11 4.53	3.03 4.75	— —	2.60 3.41	2.34 3.41	2.41 3.57
Hood M.B. Hopwood Avenue .. Green Street Nursery ..	— —	— —	1.40 1.67	1.39 1.56	1.66 1.75	— —	— —	— —	3.21 3.25	3.39 3.61	— —	— —	2.31 2.47	2.39 2.58
Hood M.B. House Yard Reservoir	1.04 1.04	1.51 1.45	1.69 1.45	1.63 1.46	1.61 1.37	2.07 2.13	2.31 1.76	3.19 2.59	2.78 2.37	2.90 2.60	1.66 1.36	2.37 1.98	2.23 1.76	2.27 2.03
Leam U.D. Methery	0.85	1.04	1.11	1.16	1.15	2.00	1.67	2.25	2.16	2.22	1.21	1.65	1.62	1.69
Lidborough U.D. Sage Works Barn Farm	— —	1.66 1.50	1.70 1.45	1.94 1.84	1.76 1.66	— —	— —	3.73 3.64	3.22 2.80	3.15 2.64	— —	2.71 2.55	2.24 2.34	2.55 2.48
Lid U.D. Sage Ground	—	2.11	2.18	2.13	2.00	—	—	4.51	3.98	3.87	—	3.31	2.89	3.00
Moston M.B. Don Hall Donham School	0.76 1.06	0.93 1.65	0.92 *1.68	1.13 *	1.10 1.86 (a)	2.08 2.37	2.01 2.22	2.77 3.71	2.48 *	2.36 *	1.31 1.53	1.82 2.67	1.69 *	1.75 *
Moston U.D. Sage Station	—	1.38	1.57	1.43	1.45 (a)	—	—	2.85	2.67	2.51	—	2.11	2.10	1.97
Moston M.B. Don Hall Don Hey Farm	0.84 1.07	1.14 1.20	1.17 1.50	1.12 1.50	1.09 1.36	1.66 2.15	1.82 1.93	2.31 2.21	2.05 2.19	2.10 2.36	1.25 1.42	1.74 1.77	1.60 1.87	1.61 2.01
Oleam C.B. Don Lane Day Nursery	1.01	1.37	*1.37	1.60	1.76	2.39	2.17	3.41	2.86	2.69	1.47	2.35	2.19	2.14
Walshead Street Day Nursery Walshead Hospital .. Walshead Walshead Park	1.63 1.23 1.55 1.16	2.44 1.86 2.37 1.51	*2.72 1.97 2.64 1.90	2.51 2.02 2.48 1.63	2.79 1.98 2.43 1.76	3.74 3.14 3.59 2.84	3.40 2.68 3.21 2.19	5.00 3.95 4.34 3.54	5.20 3.82 4.71 3.05	5.30 3.81 4.59 2.81	2.33 1.86 2.24 1.62	3.76 2.85 3.40 2.52	3.82 2.91 3.69 2.48	3.90 2.92 3.62 7.22

SITE	MEAN RESULTS													
	Summer					Winter					Year			
	1952	1953	1954	1955	1956	1951- 1952	1952- 1953	1953- 1954	1954- 1955	1955- 1956	1952- 1953	1953- 1954	1954- 1955	1955- 1956
Prestwich M.B.														
Town's Yard	1.13	1.68	1.70	1.64	1.72	2.73	2.68	3.74	3.37	3.32	1.77	2.71	2.51	2
Sewage Works	1.30	2.26	2.27	2.05	1.92	2.98	2.48	3.78	3.63	3.43	1.77	3.02	2.96	2
Radcliffe M.B.														
Secondary School	—	1.88	1.96	2.01	2.25	—	—	4.19	4.04	4.02	—	3.04	3.01	3
Close Park	—	1.40	1.64	1.24	1.79	—	—	3.34	2.95	2.75	—	2.37	2.32	2
Ramsbottom U.D.														
Cemetery	—	—	*0.93	1.08	1.07	—	—	—	2.28	2.38	—	—	—	1
Cricket Ground	—	—	0.66	1.02	1.13	—	—	—	2.50	2.36	—	—	—	1
Royton U.D.														
Hanging Chadder Farm ..	1.02	1.93	1.98	1.49	1.83	2.58	2.66	4.23	*3.60	3.64	1.64	3.08	2.71	2
Royton Park	1.03	1.51	1.61	1.63	1.47	2.61	2.06	3.39	3.15	3.06	1.47	2.44	2.53	2
Stalybridge M.B.					(c)									
Market Ground	1.24	1.74	1.99	1.92	1.72	2.54	2.25	3.15	3.05	3.46	1.65	2.49	2.52	2
Oakfield	1.11	1.88	2.04	1.81	1.68	2.39	2.05	3.13	2.74	3.07	1.51	2.48	2.27	2
Swinton and Pendlebury M.B.														
Moorside Park	1.04	1.58	1.51	1.59	1.68	2.41	2.38	3.96	3.23	3.24	1.60	2.76	2.34	2
Victoria Park	1.22	1.74	1.81	1.88	1.85	2.93	2.79	4.15	3.75	3.86	1.92	2.99	2.75	2
Whitefield U.D.														
Cricket Ground	0.77	1.13	0.92	1.12	1.31	1.70	1.78	2.48	2.61	2.42 (c)	1.19	1.79	1.71	1
Sewage Works	1.04	1.49	1.62	1.46	1.53	2.22	2.01	3.33	2.69	2.76	1.43	2.37	2.13	1
Whitworth U.D.														
Cemetery	—	1.03	0.97	1.18	1.08	—	—	2.24	2.05	2.13	—	1.64	1.56	1
Worsley U.D. (e)														
Penfold Park	—	—	—	—	1.58	—	—	—	—	—	—	—	—	
Peel Park	—	—	—	—	1.24	—	—	—	—	—	—	—	—	

* Apparatus damaged during period due to unauthorized interference.

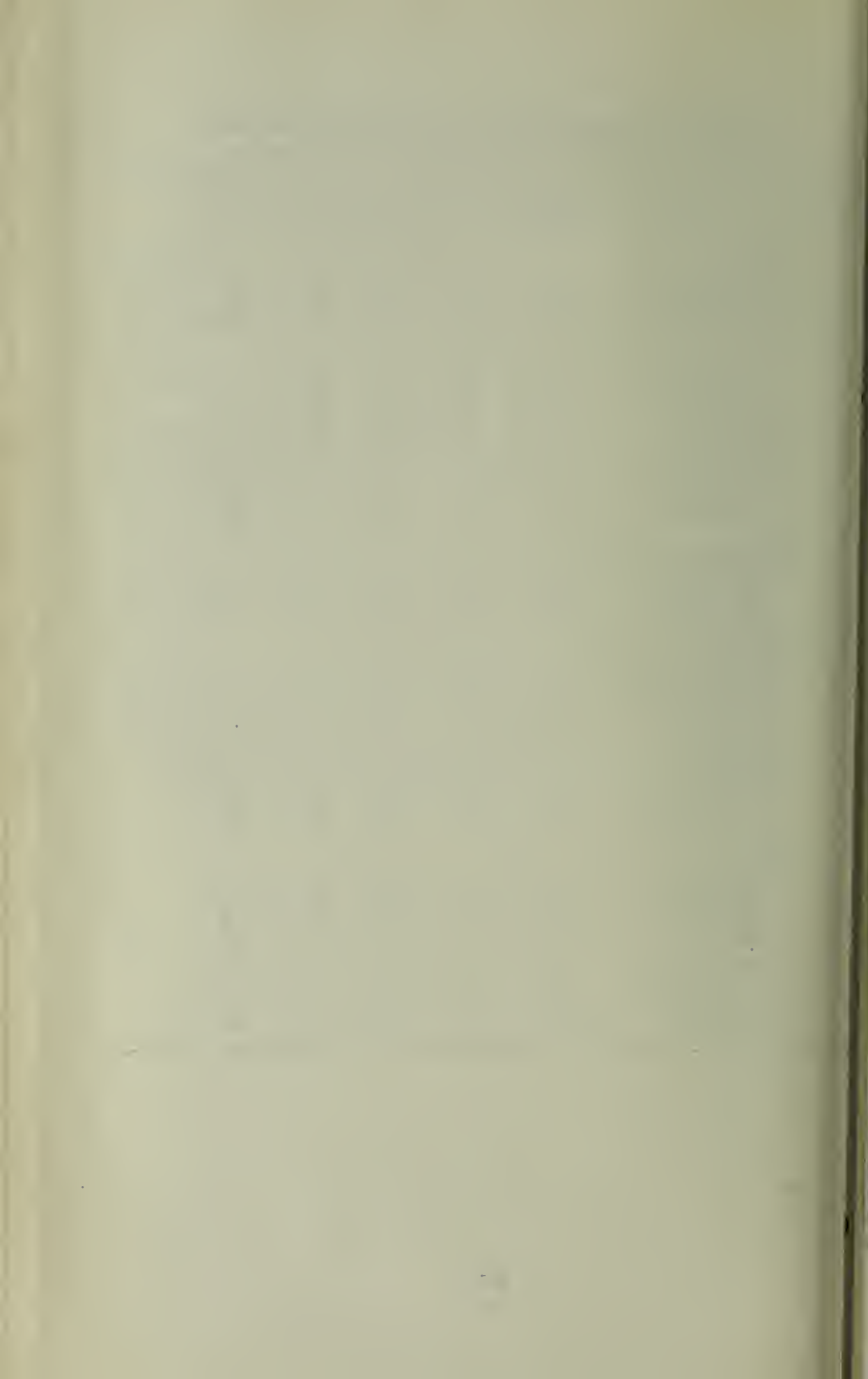
(a) 4 months ; (b) 8 months ; (c) 5 months ; (d) 11 months ; (e) 3 months.

Investigation of atmospheric pollution—Carrington/Partington Area

ESTIMATION OF DEPOSITED MATTER by deposit gauges

Average deposited matter = tons per square mile Period—October 1954 to September 1956.

SITE	Rain (inches)	p.H.	Insoluble Matter	Soluble Matter	Total solids
Bucklow R.D.					
Partington Gas Works					
Winter, 1954-1955	3.51	4.2	13.54	9.51	23.05
Summer, 1955	1.93	5.2	12.85	5.06	17.91
Winter, 1955-1956	2.26	4.5	15.33	7.55	22.88
Year 1955-1956	2.09	4.8	14.09	6.30	20.39
Summer, 1956	3.98	4.5	12.18	6.85	19.03
Bent Farm, Warburton.					
Winter, 1954-1955	3.27	5.1	4.83	6.80	11.63
Summer, 1955	1.95	5.4	5.05	3.30	8.35
Winter, 1955-1956	2.12	4.6	4.16	4.29	8.45
Year 1955-1956	2.87	5.0	4.60	3.80	8.40
Summer, 1956	3.93	5.2	5.28	6.23	11.51
Irlam U.D.					
Sewage Works					
Winter, 1954-1955	3.82	4.5	7.63	7.26	14.89
Summer, 1955	1.75	5.6	7.55	4.87	12.42
Winter, 1955-1956	1.95	5.2	6.09	6.39	12.48
Year 1955-1956	1.75	5.4	6.90	5.56	12.46
Summer, 1956	3.93	5.0	6.48	9.16	15.64
Sale M.B.					
Sewage Works					
Winter, 1954-1955	3.91	4.1	6.86	6.56	13.42
Summer, 1955	1.86	6.1	5.84	3.84	9.68
Winter, 1955-1956	2.32	4.8	6.15	5.62	11.77
Year 1955-1956	2.09	5.4	5.99	4.73	10.72
Summer, 1956	3.71	5.9	10.65	14.11	24.76
Stretford M.B.					
Metrovick—West works					
Winter, 1954-1955	3.35	3.9	56.17	11.76	67.93
Summer, 1955	1.94	4.6	56.92	9.16	66.08
Winter, 1955-1956	2.33	4.3	49.54	10.43	59.97
Year 1955-1956	2.13	4.4	56.23	9.79	66.02
Summer, 1956	3.83	4.4	27.73	10.53	58.26
Urmston U.D.					
Bowfell Road					
Winter, 1954-1955	3.73	4.3	11.16	9.46	20.62
Summer, 1955	2.05	5.7	9.03	4.96	13.99
Winter, 1955-1956	2.40	4.5	9.26	7.20	16.46
Year 1955-1956	2.24	5.1	9.14	6.08	15.22
Summer, 1956	3.70	5.1	9.81	7.75	17.56
Eccles M.B.					
Sewage Works					
Winter, 1954-1955	3.34	4.3	12.78	10.85	23.63
Summer, 1955	1.89	5.9	13.88	6.28	20.16
Winter, 1955-1956	2.23	4.4	13.64	8.13	21.77
Year 1955-1956	2.06	5.1	13.76	7.20	20.96
Summer, 1956	3.78	5.1	14.80	8.34	23.14
Westwood Park					
Winter, 1954-1955	3.93	4.1	13.37	8.86	22.23
Summer, 1955	2.23	5.4	10.11	4.67	14.78
Winter, 1955-1956	2.61	4.2	11.34	6.64	17.98
Year 1955-1956	2.42	4.8	10.73	5.66	16.39
Summer, 1956	3.99	5.3	11.80	7.02	18.82



INDEX

	PAGE		PAGE
Abattoirs	175, 176	Canal boats	198
Abstract of Registrar-General's health reports	34A	Canal boats, welfare of women and children on	117
Adult industrial centre.....	71, 76	Cancer and malignant neoplasms	20
Adulteration of food and drugs.....	172 to 174, 212 to 228	Caravan dwellings	196
Adulteration of food and drugs, particular cases	220 to 226	Care of aged and infirm persons	117 to 124
Adulteration of Milk	215 to 219	Care of mental defectives	74
Aged and infirm persons....	117 to 124	Care of mothers and young children	99 to 107
Air pollution 185 to 189, 230 to 232, 234 to 237		Cemeteries	209
Ambulance, transport and disinfection service	78 to 81	Central smokeless area	184
Analyst, Public, report of....	211 to 232	Centres—	
Ante-natal clinics	93	adult industrial	76
Anthrax	54	health	147
Antitoxin, diphtheria	43	maternity and child welfare..	99 to 103
Area of City.....	17	occupation	75 to 76
Artificial feeding	94	Cerebral palsy	143
Ascertainment of mental defectives	73	Chemical examinations for H.M. Coroner	228
Ashton House	87	Chest Clinic	139
Atmospheric pollution 185 to 189, 233 to 237		Childbirth, deaths in	95
		Child minders	103
		Child welfare centres	99 to 103
		City, description of	17
		Civil Defence (Ambulance service)	80
		Clean Air Act	7, 179
		Cleansing clinic	81, 125
		Clearance areas	7, 190 to 192
		Cockroaches	204, 205
		Committee, Health	9
		Committees-sub	10
		Common lodging houses....	87, 195, 196
		Comparability factor	5, 16
		Conjunctivitis	97
		Contents, table of	3
		Convalescence	148
		Conveniences, public	210
		Dairies	168 to 170
		Darbishire House Health Centre	147, 148
		Day nurseries.....	127, 128
		Deafness, screening tests	115
B.C.G. vaccination	131		
Barbers or hairdressers, registration of	209		
Baths, swimming	208		
Beetles	204, 205		
Births....	4, 16, 26, 28, 33, 33A, 34, 34A		
Births, illegitimate.....	4, 16, 33, 33A		
Births and birth-rates in City wards	28, 34		
Births, notification of.....	110		
Births, premature	95, 96A		
Blindness, incidence of.....	98		
Boats, canal	117, 198		
Brentwood recuperative centre	107		
Bugs	204, 205		
Burial grounds	209		

INDEX—continued

	PAGE		PAGE
Deaths (rates, causes and incidence)		Flying squad—	
4, 16, 20, 21, 23, 24, 25, 26, 27,		Emergency maternity service	94
28, 28A to 32, 34, 35		Food and Drugs Acts.....	212 to 215
Deaths in age groups.....	22	Food and drugs	
Deaths, in infancy.....	29, 30	adulteration. 172 to 174, 212 to 228	
Deaths, maternal.....	95	Food hygiene.....	166, 167
Deaths in City wards.....	28, 28A	Food poisoning.....	57 to 65, 227
Defective children.....	116	Food supply.....	166 to 174
Demolition, houses.....	191, 192	General medical services.....	66, 67
Density of population.....	17	General statistics.....	16, 17
Dental care of mothers and		German measles.....	54
young children.....	108 to 110	Graphs :—	
Diarrhoea.....	56	Atmospheric pollution.....	188, 189
Diphtheria.....	26, 29, 34A, 36A, 43	Births, deaths and marriages ..	28B
Diphtheria antitoxin.....	43	Birth rate.....	28D
Diphtheria carriers.....	43	Deaths in age groups.....	23
Diphtheria immunization.....	37 to 39	Deaths, principal causes.....	24
Disinfecting Station.....	81	Death rate.....	28c
Disinfestation.....	204, 205	Illegitimate births.....	33A
Disposal of refuse.....	205, 206	Infant mortality.....	28F
Dr. Garrett Memorial Home....	86	Maternal mortality.....	28E
Domestic help service.....	148 to 150	Meningococcal infections.....	44A
Domiciliary midwifery.....	91 to 96	Poliomyelitis, acute.....	44B
Drains, defects and repairs.....	205	Poliomyelitis, incidence in weeks	53
Drinking water.....	229	Tuberculosis, incidence, etc..	137
Duly authorized officers.....	68	Guardianship of mental	
Dwellings, moveable.....	196	defectives.....	74
Dysentery.....	36A, 55, 56	Hairdressers, barbers	
Education, health.....	76 to 78	registration of.....	209
Effluvium nuisances.....	206	Health centre—Darbishire	
Employment of young persons	199, 200	House.....	147, 148
Encephalitis, acute.....	36A, 54	Health Committee.....	9
Epidemiology.....	36	Health officers.....	12
Epilepsy.....	143	Health education.....	76 to 78
Epileptic Colony.....	82 to 85	Health visiting.....	6, 110 to 126
Estimated population.....	16	Home help service.....	148 to 150
Export of washed rags, etc.	207, 208	Home nursing service.....	143 to 147
Excess of births over deaths.....	16	“ Homecraft ” teaching	
Exhibition, homecraft.....	102	exhibition.....	102
Exhumations.....	203	Homeworkers.....	199, 200
Eye conditions.....	96 to 98, 101	Hospital car service.....	79
Factories and workshops ...	198 to 200	Hostels, municipal.....	87
Family welfare.....	150, 151	Houses-let-in-lodgings.....	193
Feeding, artificial.....	94	Houses, repair of.....	193 to 195
Filling materials, rag flock		Housing conditions.....	7, 150 to 198
and other.....	207	Housing, clearance areas.....	190 to 192
		Housing, Repairs and Rents	
		Act, 1954.....	193

INDEX—continued

	PAGE
Ice cream and milk control	168, 169
Illegitimate children	104 to 106
Immunization, diphtheria	37 to 39
Immunization, whooping cough .	40
Improvement grants	195
Incidence of blindness	98
Infant mortality 5, 23, 25, 26, 28, 29 30, 31, 32, 33, 34, 35, 114	
Infectious diseases	36, 36A, 200
Infirm persons, aged and	117 to 124
Influenza	56
Insect pests, eradication of . . .	204, 205
Inspections and visits, sanitary services	156, 157
International certificates of vaccination	57
Knowle House	107
Langho Colony	82 to 85
Lodging houses, common	87, 195, 196
Lunacy and Mental Treatment Acts, 1890-1930	72, 73
Malaria	36A, 54
Malignant neoplasms and cancer	5, 20
Manchester District Nursing Institution	143, 147
Manchester and District Regional Smoke Abatement Committee	233 to 237
Manchester Jewish School for handicapped children	75
Map of wards of the City	16A
Markets Department,	175 to 178
Marriage rate	4, 26
Massage at centres	99
Massage establishments	208, 209
Maternal and child welfare services	89 to 151
Maternal mortality	5, 16, 95
Maternity and child welfare centres	99 to 103
Measles and German measles . .	36A, 54

	PAGE
Meat and other foods, supervision of	7, 175 to 178
Meningococcal infection	36A, 44
Mental Deficiency Acts, 1913-38— ascertainment	73
forms of care,	74
guardianship	74
removal from supervision . . .	74
Mental Health Service	6, 68 to 76
Mental health visitors	68, 71
Mental hospitals	69, 72, 73
Meteorological data	18, 19
Mice, destruction of rats and . .	200 to 204
Midwifery service	91 to 96
Midwives, supervision of	92
Midwives, training of	92
Milk, adulteration of	215 to 219
Milk and ice cream control	168, 169
Milk, bacteriological and biological examinations of	171
Milk (Special Designation) Regulations, 1949	170
Mobile immunization unit	81
Mortality, infant 5, 23, 25, 26, 28 to 35, 114	
Mortality in City wards	28, 28A
Mortality, maternal	5, 16, 95
Mortality rates, quinquennial . .	27
Mothers evening clubs	102, 103
Mother and baby home	107
Moveable dwellings	196, 197
Municipal car pool	80
Municipal hostels	87
National Assistance Act	120 to 124
Neo-natal deaths	35, 95
Noise nuisance	206, 207
Notification of infectious diseases	36A
Notification of births	110
National Society for the Prevention of Cruelty to Children	126
Nurseries and Child Minders Regulation Act, 1948	103
Nursing homes, registration of . .	126

INDEX—continued

	PAGE		PAGE
Occupation centres	75 to 76	Registrar General,—abstract of	
Occupational conditions	198 to 200	health reports of	34A
Offensive trades	206	Rehousing on medical grounds..	192
Officers, health	12	Repairs to houses	193 to 195
Ophthalmia neonatorum ..	36A, 96, 97	Rodent control	200 to 204
Outworkers, factory	199	Sale of certain poisons	209
Overcrowding, abatement of ...	192	Sanitary accommodation	205
Paratyphoid fever	36A	Sanitary conditions, general..	200 to 209
Pemphigus neonatorum.....	36A, 94	Sanitary services, inspections and	
Peri-natal deaths	35	visits	156, 157
Persons per acre	17	Scabies	125
Persons per house	17	Scarlet fever	36A, 56
Pharmacy and Poisons Act, 1933.	209	School health service	116
Physiotherapy	99	Screening tests for deafness	115
Pleasure fairs	207	Sewers, defects	205
Pneumonia	36A, 54	Shops and employment of young	
Poisons, sale of	209	persons.....	199, 200
Poliomyelitis	6, 36A, 44	Short-term care of mental	
Poliomyelitis vaccination	41, 42	defectives	74
Poliomyelitis in City wards	49, 52	Sickroom equipment loan service	147
Poliomyelitis consultations	57	Slum clearance.....	190 to 192
Pollution,		Smallpox	36, 36A, 43
atmospheric ..	185 to 189, 233 to 237	Smoke prevention.....	179 to 189
Population, census	16	Smokeless zones	184, 185
Population, estimates of	16	Staff—	
Population, in City wards	28	entrants to Corporation service	66
Population, density of	17	medical examinations	66, 67
Post-natal clinics	93	number employed	13
Post-war clearance areas	190, 191	welfare	67
Premature babies.....	95, 96, 96A	Statistics, general.....	16, 17
Prevention of smoke.....	179 to 189	Statistics, vital	20 to 35
Pre-war clearance areas	191	Still-births	16, 35, 95
Psychiatric social workers	68	Student health visitors	126
Public Analyst, report of ...	211 to 232	Sub-committees	10, 11
Public conveniences	210	Superannuation, medical	
Puerperal pyrexia	36A, 94, 95	examinations for	66, 67
Quiquennial mortality rates	27	Supervision of mental defectives	73, 74
Rag flock and other filling		Swimming baths	208
materials.....	207		
Rags, washed, export of	207	Tips, refuse	205
Rateable value	17	Tuberculosis	24, 25, 129 to 142
Rats and mice, destruction of	200 to 204	Tuberculosis Clinic.....	139
Recuperative centre	107	Tuberculosis mortality	133 to 137
Refuse disposal	205	Tuberculosis	
Regional Smoke Abatement Com-		notifications	134, 136, 137, 138
mittee—Manchester &		Typhoid and paratyphoid fever.	36A, 55
District	233 to 237	Typhus fever	26

INDEX—continued

	PAGE		PAGE
Unfit houses	7, 190	Wards, death in	28
Unmarried mothers	104 to 106	Wards, infectious diseases in....	36A
		Wards, poliomyelitis in	49, 52
Vaccination, B.C.G.	131	Wards, population of	28
Vaccination, International certificates of	57	Washed rags, export of	208
Vaccination, poliomyelitis	41, 42	Water supply	157 to 166, 229
Vaccination, smallpox	36	Water, drinking	229
Venereal diseases	151	Welfare centres, maternity and child	99 to 103
Verminous conditions	125	Welfare, family	117, 150, 151
Vital statistics	20 to 35	Welfare foods	101
Voluntary workers at welfare centres	101	Whooping cough	55
		Whooping cough immunization	40
Walton House	87	Women's Voluntary Services ...	79
Wards, area of	28	Workshops and factories ...	198 to 200
Wards, births in	34		
		Young persons, employment of	199, 200

